INDUSTRIAL ARTS TEACHERS' PERSONAL CHARACTERISTICS RELATED TO THE FREQUENCY OF DISCIPLINE PROBLEMS

by

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INTRODUCTION

THE PROBLEM

A lack of discipline has frequently been reported as a major problem in public school systems. The lack of discipline manifests itself in many problem areas. This lack may be stimulated by student rejection of authority. Gallup (1974:21) reported that discipline "again heads the list of problems cited most often by survey respondents." Discipline has, in fact, been named in the Phi Delta Kappan "Sixth Annual Gallup Poll of Public Attitudes Toward Education" as the number-one problem of the schools in five of the last six years. Most institutions of authority have been challenged including the police, the military, the church, the high schools, and the universities. Young people do not seem to want to be admonished by their superiors, that is, if they even recognize their superiors at all (Dobson, 1973).

One school of thought supports the belief that many discipline problems are caused by teachers. Jessup (1971:27) maintained that "far too often additional trouble of a significant nature arises after a teacher has verbally pounced on a student, denouncing him before the class." Rules and regulations developed by teachers to govern students should be reasonable. Harsh and excessively numerous rules can create behavior problems in classrooms and excessive control may manifest

feelings of rebellion and hostility. Research has provided ample evidence that excessively authoritarian classrooms can stimulate similar authoritarian behavior in students (Webster, 1968).

The belief that students reject authority is not a recent deduction. Brandes (1956:16) indicated that:

> Socrates some two thousand years ago is said to have remarked, 'The children now love luxury; they have bad manners, contempt for authority, they show disrespect for their elders . . . and they tyrannize their teachers.'

Students usually resent being forced to adopt to rules for which they have had no input. If the limits that exist within the classroom can be expressed openly, much of the resentment can be avoided. If this process is done carefully enough, teachers should find that students share their limits and that behavioral problems will be minimal (Harris, 1973).

The authoritarian teacher may perceive his or her classroom situation as a source of almost unlimited power. He may perceive his students as objects to be manipulated, used, or bullied. Crow (1975: 42) pointed out that a teacher of this nature, being dogmatic, "probably has little patience with the concept of allowing students to voice an opinion different from his own." A teacher that holds this position may have numerous minor rules which tend to become as prominent as the course material and according to Crow (1975:42) these rules might "involve everything from how to fold one's paper and how to sit in one's chair to how to march out of class." The fact that the review of literature provided evidence that students reject authoritarian

teachers supported the investigator's major hypothesis that the level of teacher dogmatism is significantly and positively related to the frequency of discipline problems in each of seven selected discipline problem areas identified as occurring in the classroom. Level of dogmatism is a measure of authoritarianism which is further detailed in Chapter 3.

SIGNIFICANCE OF THE STUDY

As previously stated, a lack of discipline has been reported as the number one problem in public schools five out of six years by the Phi Delta Kappan "Annual Gallup Poll of Public Attitudes Toward Education." The focus of this study was on one aspect of this spectrum. A limited number of studies have investigated the variables associated with the frequency with which discipline problems occur. This study attempted to focus on selected variables hypothesized to be pertinent to the frequency of discipline problem occurrence. Specifically, this study is centered on discipline in industrial arts classrooms or laboratories where the potential of discipline problem occurrence may be magnified greatly. The nature of industrial arts sometimes lends itself to situations more perplexing than other subjects (Myers, 1951).

The findings of this study may have implications for teacher selection and teacher education. New teachers are not fully prepared by teacher education institutions to cope with discipline problems.

Jessup (1971:8) felt that "after four years behind the protection of ivy-covered walls, the secondary school can be somewhat terrifying to an individual who fails to see that teaching is more than talking, fact giving, and report writing." It is imperative that students in teacher education be aware that, in recent years, secondary students have demanded more input in the decision making process of education including the classroom. Clark (1975:28) stated that "if the current crop of education students is not receptive to the philosophy of student autonomy, friction may arise when they begin teaching." The findings of this study indicate that a closed minded, autocratic teacher may be confronted with more discipline problems than an open minded, democratic teacher.

It is not surprising that new teachers list classroom management as their number-one problem. However, the future looks quite dim. Morse (1975:62) reported that:

> Many seasoned teachers echo the same thing, and some leave the profession to avoid the daily hassle. No one can expect fewer problems in the days ahead. Schools are facing reduced special services and the addition of special pupils to the 'mainstream.' Pupils are more demanding; peer power and group contagion make the teacher an adult minority of one.

STATEMENT OF THE PROBLEM

The problem was to determine what relationships exist among teacher perceived frequency of discipline problems occurring in secondary industrial arts classrooms or laboratories, level of teacher dogmatism, and selected demographic variables.

RESEARCH QUESTIONS

The dependent variables consisted of seven areas of discipline problems occurring in the classroom. The independent variables were the levels of teacher dogmatism and seven demographic variables. The direction of the major research hypothesis surmised that teachers having a higher level of dogmatism would have a greater frequency of discipline problems. However, other relationships between the level of teacher dogmatism and the frequency of discipline problems were considered. The relationships referred to were: teachers with a low dogmatism level having a high frequency of discipline problems, teachers with a high dogmatism level having a low frequency of discipline problems, and teachers with an average dogmatism level having an average frequency of discipline problems. The other independent variables were: teacher age, teaching experience, class size, type of program, type of laboratory, type of school, and grade level taught.

Teacher age and years of experience were considered because inexperienced teachers as a rule have more discipline problems than experienced teachers (Pyles, 1960). The type of school (urban or rural) and class size were considered in that research has shown that discipline is a more serious problem in urban schools and that the larger the school the more likely disruption is to occur. The two types of industrial arts programs considered in this study were innovative and traditional. The respondents were also asked if the program was part innovative and part traditional. The type of program was considered to investigate the relationship of discipline problems in one type of program as compared to the other.

The three types of laboratories considered were general, general unit, and unit. The type of laboratory was considered because one type might lend itself more to discipline problems than another. For example, in the general lab, the students usually work in separate, unrelated work areas, whereas in the unit lab the students usually work in a single area, possibly creating a situation for fewer discipline problems. The final independent variable considered was grade level taught which was divided into three sections: 7-8, 9-10, 11-12. Based upon these judgements, the following research questions were formed:

1. Is the level of teacher dogmatism positively related to frequency of discipline problems in each of the selected seven discipline problem areas occurring in the classroom or laboratory?

2. Is teacher age related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory?

3. Is teaching experience (number of years) related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory?

4. Is class size related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory?

5. Is the type of program (innovative or traditional) related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory?

6. Is the type of laboratory (general, general unit, or unit) related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory?

7. Is the type of school (urban or rural) related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory?

8. Is the grade level taught (7-8, 9-10, or 11-12) related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory?

9. Do multiple relationships exist among the variables, level of teacher dogmatism, teacher age, teaching experience, class size, type of program, type of laboratory, type of school, grade level taught, and frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory?

DEFINITION OF TERMS

1. Authoritarianism: "the method of controlling others in which one person sets the tasks, prescribes the procedures, and judges the results without permitting others to share in the decision process" (Good, 1973:51).

2. Belief-disbelief systems:

> The belief system is conceived to represent all the beliefs, sets, expectancies, or hypotheses, conscious and unconscious, that a person at a given time accepts as true of the world he lives in. The disbelief system is composed of a series of subsystems rather than merely a single one, and contains all the disbeliefs, sets, expectancies, conscious and unconscious, that, to one degree or another, a person at a given time rejects as false" (Rokeach, 1960:33).

3. Client control: a necessary means of establishing and maintaining order in an organization and a necessary measure to the achievement of the primary organizational goals (Eidell, 1965).

4. Custodialism and humanism: a custodial school is characterized by a highly rigid atmosphere; the primary objective is maintenance of control; permissiveness is outlawed, it is autocratic in nature with communication flowing downward only--in a humanistic school cooperative interaction prevails; self-discipline is substituted for strict teacher control; a democratic atmosphere exists with two way communication (Hoy, 1965).

5. Discipline: "the characteristic degree and kind of orderliness in a given school or the means by which that order is obtained; the maintenance of conditions conducive to the efficient achievement of the school's functions" (Good, 1973:186).

6. Dogmatic: "(of teaching) characterized by authoritative statements on the part of the teacher intended for acceptance by the pupils without question" (Good, 1973:194).

7. Dogmatism: "refers to the general degree of open and closed mindedness; thus high dogmatism is synonymous with closed mindedness and low dogmatism is synonymous with open mindedness" (Hoy, 1965:5).

8. General lab: offers instruction in a variety of different activities in unrelated, separate work areas (Wilber, 1973).

9. General unit lab: has characteristics of both the general and unit labs and the student is exposed to different fields in one particular area (Wilber, 1973).

10. Innovative program: includes courses such as: Exploring Technology, Modern Industry and Technology, American Industry, World of Communications, World of Manufacturing, World of Construction, and World of Transportation (Industrial Arts Education Service, 1972).

11. Open and closed mindedness:

> . . . the extent to which the person can receive, evaluate, and act on relevant information received from the outside on its own intrinsic merits, unemcumbered by irrelevant factors in the situation arising from within the person or from the outside (Rokeach, 1960:57).

12. Pupil control ideology: "a continuum of personal ideology with custodial ideology at one polar extreme and with humanistic ideology at the other" (Eidell, 1965:8).

13. Traditional program: includes courses such as: General Industrial Arts, Electricity/Electronics, Graphic Arts, Mechanical Drawing, Woodworking, Metal Working, and Photography (Industrial Arts Education Service, 1972).

14. Unit lab: exposes the student to the tools, processes, materials, and informative aspects of a single area (Wilber, 1973).

ASSUMPTIONS

The following assumptions were made for the research in this study:

1. Discipline problems are present to some extent in virtually all schools.

2. The teachers responded honestly concerning the frequency of discipline problems occurring in their classrooms or laboratories.

3. It is possible to ascertain the level of teacher dogmatism with a pencil and paper instrument (see discussion under Instrumentation).

LIMITATIONS

The following limitations should be considered when drawing conclusions from this study:

1. The study included only industrial arts teachers in Virginia.

2. While certain independent variables were identified in this study, these by no means represent all variables relating to discipline problems.

3. The hypotheses do not attempt to establish an antecedent-consequence explanation of the variables.

4. The frequency of discipline problems was based on teacher perception and not the actual number of problems relative to a standard measure.

SUMMARY

The seriousness of the problem was addressed in Chapter 1. It was significant to note that new teachers listed classroom management as their number-one problem and discipline was reported to be the number-one problem in the public schools five out of six years in a national survey. The major hypothesis of the study was that teacher dogmatism is positively related to frequency of discipline problems occurring in the classroom.

Chapter 2

REVIEW OF THE LITERATURE

INTRODUCTION

The major goal of this study was to assess the relationship between the frequency of discipline problems occurring in the classroom and the level of teacher dogmatism. This chapter contains literature related to the theory of dogmatism, pupil control ideology of public school staff members, authoritarianism as a discipline problem stimulant, discipline in industrial arts, and urbanization and school size as contributing factors to discipline problems. The characteristics of the open and closed minded individual are discussed as well as the authoritarian and the permissive parent. The latter section of the chapter presents a study which identified a series of discipline problems reported to be significant as perceived by a sample of teachers in the United States.

One objective of the literature review was to support the hypothesis that teachers having a higher level of dogmatism will have a greater frequency of discipline problems. Evidence is presented indicating that students reject authority; thus, the hypothesis that dogmatic (authoritarian) teachers will have a higher frequency of discipline problems.

THEORETICAL FRAMEWORK OF THE BELIEF-DISBELIEF SYSTEM: OPEN AND CLOSED MINDEDNESS

An individual's belief-disbelief system is composed of two parts: a belief system and a disbelief system. The belief system of an individual portrays "all the beliefs, sets, expectancies, or hypotheses, conscious or unconscious" that one accepts as true of the world in which one lives. Contradictorily, the disbelief system portrays "a series of subsystems rather than merely a single one, and contains all the disbeliefs, sets, expectancies, conscious and unconscious" that one rejects as false (Rokeach, 1960:33). The belief-disbelief system was organized into three dimensions and according to Rokeach, these three dimensions represent the extent to which one's mind is open or closed. Presented in Table 1 is Hoy's (1965:13) adaption of Rokeach's definitions of the open and closed mind based on the three dimensions listed below:

1. Belief-Disbelief Dimension
2. Central-Peripheral Dimension
3. Time-Perspective Dimension

The first dimension, the belief-disbelief dimension, is the union of the belief system and the disbelief system as each was previously defined. The second dimension, the central-peripheral, consists of three layers. A central region represents one's "primitive" beliefs. These are beliefs concerning "self" and the world in which one lives. An intermediate region represents "the beliefs a person has in and about the nature of authority and the people who line up with

Table 1

Characteristics of Open and Closed
Belief-Disbelief Systems

A Belief-Disbelief System Is	
Open	Closed
to the extent that	
1. the intensity of rejection of disbeliefs is relatively low;	1. the intensity of rejection of disbeliefs is relatively high;
2. there is a high degree of ability "to look at the other side," i.e. to examine one's beliefs and disbeliefs;	2. there is isolation and differentiation between belief and disbelief systems;
3. disbelief subsystems are differentiated to a high degree;	3. disbelief subsystems tend to be grouped together as one and completely rejected;
4. there is a free communication between the components within both belief and disbelief systems;	4. the components within both belief and disbelief systems tend to be segregated;
5. the world is perceived as friendly;	5. the world is perceived as threatening;
6. authority is not absolute and evaluations are made on the merit of the issues independent of the source;	6. authority is absolute and people are judged by their acceptance or rejection of authority;
7. the past, present and future are placed in perspective.	7. the past or present or future becomes a point of fixation.

authority." A peripheral region represents "the beliefs derived from authority" such as birth control. The beliefs about birth control could, for example, be derived from religious authority. The third dimension is time perspective. This dimension refers to one's beliefs "about the past, present, and future and the manner in which they are related to each other" (Rokeach, 1960:35-53).

The open minded person discerns the world as a friendly place; he or she is not afraid of the future. A need to preclude threat does not exist. According to Hoy (1965:31), authority is not worshipped. On the contrary it "is placed in a realistic perspective consistent with other information. There is a relatively high degree of tolerance present." In contrast, the closed minded person discerns the world as threatening; he is fearful of the future as well as the past and a need to preclude threat exists. Hoy (1965:31) also explained that:

> Authority is viewed in absolute terms; others are judged to the extent of their agreement or disagreement with authority. There is a relatively high degree of intolerance. In short, authority and general intolerance are outstanding features of the closed minded person.

The degree of open and closed mindedness is referred to as dogmatism. Thus, high dogmatism is synonymous with closed mindedness and low dogmatism is synonymous with open mindedness (Rokeach, 1960).

The closed minded, intolerant classroom teacher who teaches subjects such as industrial arts where a relatively high degree of tolerance and leniency may be necessary to permit students to express themselves in laboratory work and design, may face confrontations and

be rejected by students. However, in laboratories where students use tools and machinery, certain rules and regulations are necessary to promote safety and machine maintenance. If rules and regulations are forced on students by a closed minded teacher, discipline problems may arise.

PUPIL CONTROL IDEOLOGY

An instrument to measure the pupil control ideology of public school professional staff members was developed by Eidell (1965) based on an adapted theory of client control ideology of staff members in mental hospitals. In explaining the similar client control of public schools, mental hospitals and prisons, Carlson (1964) pointed out that these organizations have no choice in the selection of clients, and the clients receive services of the organization on a mandatory basis. In any of the organizations whether the goal is education, treatment, or rehabilitation, Eidell (1965:13) maintained that "the organization is necessarily in contact with clients of whom some have little or no desire for the services rendered by the organization."

The theory upon which Eidell's Pupil Control Ideology Instrument (PCI) is based was the findings of research by Gilbert and Levinson (1957). Their research indicated that the control ideology of mental hospital staff members is an important variable related to the control of patients. Following the work of Gilbert and Levinson, the PCI of public school staff members was "conceptualized as a continuum extending

from 'custodialism' at one extreme to 'humanism' at the other" (Eidell, 1965:22).

Upon completion of the PCI, Eidell found that the PCI of secondary school teachers was significantly more custodial than the PCI of elementary school teachers and that the PCI of more experienced teachers was not significantly more custodial than the PCI of less experienced teachers (Eidell, 1965). Hoy (1965) and Heineman (1971) found that significant relationships exist between dogmatism and PCI; low levels of dogmatism were found to be significantly related to humanistic PCI and high levels of dogmatism were found to be significantly related to custodial PCI. Therefore, the findings of Eidell (1965), Hoy (1965), and Heineman (1971) supported the inquiries in this study associated with dogmatism, teaching experience, and discipline problems.

Since the development of the PCI, it has been used in other research as a major variable. In a study dealing with pupil control, Longo (1972:5) found "that a positive relationship existed between dogmatism and pupil control attitudes." In a similar study on dogmatism and the PCI of public school professional staff members, Hoy (1965) found that the PCI of closed minded teachers was significantly more custodial than the PCI of open minded teachers. The personality characteristics of the open minded individual according to Hoy (1965:31):

> . . . appear to be consistent with a client control ideology which stresses an atmosphere where behavior is examined in psychological terms, not moralistic terms; an atmosphere where clients will be self-disciplinary rather than disciplined; an atmosphere

> where a democratic climate with its flexibility in rules and regulations prevails; and an atmosphere that fosters friendliness and optimism. The personality characteristics of the closed minded individual appear to foster a client control ideology which emphasizes an atmosphere where client misbehavior is viewed as a personal affront; an atmosphere where there is a minimum of communication both within and across status lines; an atmosphere where clients are expected to accept the decisions of their superiors without question; an atmosphere characterized by pessimism and mistrust; and an atmosphere where strict control is central.

Finally, in a study on relationships among values, dogmatism and PCI of high school principals, Heineman (1971:47) found that "high school principals who are more open minded have more of a humanitarian type pupil control ideology than those principals who are closed minded." Adding further support to this finding, Hoy (1965:74-75) stated that "open mindedness is strongly related to a humanistic pupil control ideology" which would "suggest that open mindedness and a humanistic type classroom atmosphere complement each other." Hoy further stated:

> If more effective teachers are to be selected for a particular position, the use of instruments to measure personality structure along the dimension of open mindedness and to measure pupil control ideology might be employed in the selection process.

Closed minded (dogmatic) teachers were found to be significantly more custodial and a positive relationship was found to exist between dogmatism and pupil control attitudes. A custodial pupil control ideology implies a classroom control concept of authoritarianism and a high level of dogmatism. Since the literature review indicated that students reject authority, it was hypothesized that a positive relationship exists between the level of teacher dogmatism and the frequency of discipline problems occurring in the classroom.

AUTHORITARIANISM--A DISCIPLINE PROBLEM STIMULANT

Traditionally, the classroom was controlled by authoritarian methods. These methods, successful as they were, contradicted the democratic philosophy. However, it was believed as reported by Calabresa (1965:47) that this "authoritarian regime" was "essential to the mastery of absolutes or to the mastery of specifics which could be ultimately and accurately measured." Dodge (1975:59) stated that:

> 'Discipline' in its connotation of demand and punishment, of autocratic authority went out of style about twenty-five years ago. But because to teach remains the paramont purpose of teachers, and since this purpose cannot be accomplished without classroom order, 'discipline' is still necessary, although it wears a new and prettier dress.

Discipline is still present although it is viewed as "control" rather than punishment. Each teacher has a different personality which has a different impact on students. Therefore, each teacher must create his or her own way of handling problems. Several surveys have reported that fairness is a first requisite for successful teachers (Dodge, 1975).

Concern over the personal qualities of teachers is reflected by a growing body of research. It has been reported that effective teachers are more friendly, cheerful, sympathetic, and morally virtuous rather than their opposites, and that ineffective teachers lack a sense of humor, are more impatient, are more authoritarian, and are less sensitive to student needs (King, 1970). In a study of the roles of the ideal

teacher, King (1970:62) reported that teachers and students under twenty-one years of age indicated "agreement in their expectations of the behavior traits of the ideal teacher. Of their top ten choices [out of forty], five were identical (i.e., honest, patient, interested in people, open minded, and sense of humor)."

At the beginning of the year, some teachers set forth their rules by forceful proclamations such as, "Don't be late to class," "Don't talk out of turn," and "Don't chew gum." These rules are sometimes written on the board or mimeographed and distributed to the students. Harris (1973:288) felt that "in a classroom where the teacher makes such authoritarian edicts, the students will be given little chance to discipline themselves." It was also reported by Harris (1973: 290) "that the more student input, the more the rules are negotiated, the more they are respected."

The results of several studies according to Broughton (1974: 149), reported "that the unwitting behavior modifier who reprimands a child as an example may produce more instead of less disruption in the observers"; and Macmillion (1973:93) stated that "the classroom teacher for whom a child has little affection will be relatively ineffective as a disciplinarian since little anxiety is generated by withdrawal of affection."

One of the causes of student activism is student rejection of authority. Erickson (1969:12-13) expressed that:

> A destructive student activism is emerging. . . . they appear to follow a standard propaganda line that classifies any and all authority as totalitarian adopting an underlying philosophy of anti-authority, anti-administrative establishment, anti-school law, and anti-civil law.

Many demonstrations are carried out through careful plans of collective protest which satisfy the urge of students to resist authority. School administrators should become aware of the fact that the methods of handling student activism are different from methods employed in the past. Administrators who seek solutions based on historical authoritarian approaches fail to understand student activism of today (Erickson, 1969). Heineman (1971:9) stated that:

> It is conjectured that the high school principal who regards 'freedom' and 'equality' highly and who is less dogmatic, recognizes that members of an educational system learn through interaction and experience and views learning more in socio-psychological terms. Such a principal may, because of his organization of values, be in a better position to mediate the conflict that often prevails in the schools today.

Two types of student unrest was identified by Nielsen (1969). One type is displayed by restive students who honestly wish to find cooperative solutions to existing school problems, and the other type is displayed by anarchistic, anti-authority students who seek not solutions but continual confrontations. The rebel, divergent from the deceitful and apathetic student, presents an open challenge to school authorities to which they must react and the reactions threaten the order of the school (Phillips, 1969). According to Hagstrom (1969:2), "the rebellious student is likely to claim some sort of legitimacy for his behavior or at least challenge the authority of teacher and principal."

Male students may present somewhat different problems than females. According to Douvan (1966), male adolescence is centered around the problem of autonomy, while adolescent girls on the other

hand are concerned with expressive relationships. If boys are more concerned with personal autonomy, they can be expected to be more consistently engaged in confrontations with authority figures. Snider (1975:303) felt that "discipline must not be spontaneous reactions to isolated incidents, but consistent actions that arise from a set of concepts and principles of behavior that are used in planning and practicing the teaching-learning-process."

Students would be the last to say that all rules and regulations should be eliminated. However, House (1973:9) felt that:

> They strongly reject those regulations that are designed to degrade them and suggest that they cannot be trusted. It is increasingly evident that today's young people are not willing to accept authority without question. Most of all, pupils feel that they or their representatives should be able to challenge those rules and regulations that are punitive.

Many schools are organized almost like prisons instead of institutions where responsible young people can learn. Many of these young people become rebellious, nonproductive, and resentful because of punishments for infractions of arbitrary rules which more often than not they had no voice in deciding (Adams, 1972).

PARENTAL INFLUENCE ON SCHOOL DISCIPLINE

In the last few years, parents have been in the gradual process of abdication. The head of the household gave way to joint powers which encouraged children's playing one parent against the other. When a "spank-the-bottom parent was cancelled out by a permissive mate, the child ran wild through the home and right into the classroom" (Stoops,

1972:12). Therefore, student unrest may be the result of too much permissiveness in rearing children (Halleck, 1968). Some parents through painstaking efforts to avoid creating neuroses in their children have abdicated their responsibility to teach and discipline their children. The result is a spoiled, greedy youth who is unable to tolerate the slightest frustration without showing an angry or infantile response. Adorno (1950:337) stated the growing child learns that:

> Some of the members of the family are in an authoritative, others in an equalitarian or in a weaker position than himself. Some are the same, others are of the opposite sex. It soon becomes evident to the youngster what kind of behavior is considered appropriate and will lead to reward and what kind of behavior will be punished. How parents, being the first authorities in the life of a child, handle the problems of discipline must be assumed to be of crucial importance in the establishment of attitudes toward authority. Evidence from the present study as from others support the psychoanalytic axiom that the first social relationships to be observed within the family are, to a large extent, formative of attitudes in later life.

The authoritarian parent shapes, controls, and evaluates the youngster by a set standard of conduct usually theologically motivated. Verbal give and take is not encouraged believing that the parent's word should be taken for what is right (Baumrind, 1970). According to Baumrind (1970:106), the opposite type parent, the permissive parent:

> . . . attempts to behave in a nonpunitive, acceptant and affirmative manner towards the child's impulses, desires, and actions . . . makes few demands for household responsibility and orderly behavior . . . consults with him about policy decisions and gives explanations for family rules . . . allows the child to regulate his own activities as much as possible, avoids the exercise of control, and does not encourage him to obey externally defined standards.

Research indicates that childhood social behavior involves antiadult behaviors. This is evident when adults who are not family

members or friends become hated enemies. Behavior is elicited by actions ranging from calling an old lady a witch to physical destruction of property. In explaining such an antisocial behavior in children, it should be remembered that they are immature regardless of how knowledgeable they seem at times. Also, some of childrens' undesirable actions reflect their lack of social skills and the necessary self-control required for them to redirect their offensive impulses into more acceptable behavior. Children, perhaps like adults, need to feel that they have the power and ability to rule others. This behavior is unpleasant at any age. However, this dominating impulse may be needed to help a child sever the ties from childhood dependency (Webster, 1968). Finally, Webster (1968: 16) reported that "some writers contend that the hostility and aggression children direct against adults are, in reality, juvenile efforts to counteract the impulses to remain as subservient and submissive as they were in early childhood."

DISCIPLINE IN INDUSTRIAL ARTS

As in the total school, discipline problems likewise exist in the industrial arts laboratory and classroom. It is the opinion of some academic teachers that the industrial arts teacher does not have as many discipline problems because the students are highly motivated before the course starts. This is a false assumption because many students do not look forward to coming to class. Many students are disappointed when they discover that they are required to start with simple concepts and master

fundamentals. If the teacher is not careful, motivation will be lost (Joss, 1959). On occasions, as reported by Myers (1951:273), "the nature of the work sometimes lends itself to situations which can be more difficult than traditional classrooms where students remain seated during a lecture or recitation period." According to Ambrose (1953:176), "discipline is something that may make or break a new teacher or a teacher in a new situation." Often students who are deeply troubled or frustrated manage to hide their problems successfully and appear to be "adjusted" until they hit the free and active atmosphere of the industrial arts classroom (Down, 1967).

The discipline problems that arise in the industrial arts classroom or laboratory are stimulated by several factors. Joss (1959:8) stated that the "worst disciplinary problems arise from the custom of 'dumping' the incorrigibles, imbeciles, and the 'hopeless' into a 'special shop class.'" Many discipline problems are created by the student who needs to be the center of attention whether he gains this attention through horseplay, loud talking, bad behavior, or dirty jokes (Down, 1967). As mentioned previously in this study, an authoritarian atmosphere sets the stage for discipline problems. Down (1967:41) felt that "rigid silence in shop programs and work areas and rigid project selection do very little for most students." One major cause of discipline problems is disorganization. Discipline problems are minimized when the students have a step by step plan of action to be followed. Joss (1959:25) maintained that "good organization, imagination, understanding, consistency, and hard work make for a well-disciplined shop"

and Myers (1951:273) stressed that "a teacher who has mastered the subject matter has a valuable start in student-teacher relations."

It is also apparent in industrial arts classes as in other classes, that the frequency of discipline problems are lower if the atmosphere is open and democratic. A permissive atmosphere does not, however, mean a class without control. It is possible to have freedom with definite rules even with the roughest students. When the students are involved and are asked to make a set of rules, they generally come up with a good working set. Having set their own rules, they are much more likely to live with them (Down, 1967). Silvius (1971:322) stated that "in today's schools discipline is that phase of education that helps students develop self-control, character, orderliness, and efficiency." In a well-disciplined laboratory or classroom the prevailing atmosphere is one of friendliness and congeniality. The students are expected to be honest, industrious, cooperative, and interested in their work--and they usually are (Struck, 1938).

It was indicated that discipline problems arise in industrial arts classes as in other classes and that industrial arts classes on occasions lend themselves to discipline problems even more. Two important factors in preventing discipline problems reported were good teacher organization and an open and democratic atmosphere for learning.

URBANIZATION AND SCHOOL SIZE AS CONTRIBUTING FACTORS

An investigation of urban high schools conducted by Syracuse University revealed that 85 percent of the schools had experienced

disruption. The study also pointed out that the larger the school the more likely disruption is to occur (Bailey, 1970). The fact that society has imposed compulsory attendance laws on all students but has failed to provide special facilities or staff for many students with special problems, Erickson (1969:22) maintained that "unrest is fostered within those schools that must retain the delinquent, the neurotic, and the psychotic." Pyles (1960:1) stated that "junior high schools are enrolling an ever-increasing number of maladjusted youth" and "areas such as supervision, organization, public relations and other administrative responsibilities have to be neglected." In the classroom, as in any situation involving two or more human beings, Snider (1975:301) stressed the necessity "to set limits so that a child does not violate the integrity of other individuals."

In some schools, municipal police are assigned to patrol the halls on a regular basis to insure a setting where students and teachers can be free from the danger of physical assault. A study by the New York State Department (1972:3) reported that:

> In many urban schools this is a serious problem. Consequently, school districts arrange for security guards in the building and around the premises, screen visitors carefully, place plexiglass in the windows, install deadlocks on certain doors, and take other security measures.

The study also stated that a real need existed to "maintain a low pupil/teacher ratio for certain learning groups so that the teacher may give more personalized, tailored instruction to meet individual student needs." In a study on student unrest, Duggal (1969) reported that the fifty largest schools and the schools with the largest enrollments had the most disruptions.

Learning is optimized when the classroom climate is focused on the curriculum instead of disruptive student behavior. Chamberlin (1969:120) stated that "all teachers have discipline problems. Some have many while others have relatively few." Proper discipline is an essential part of successful teaching. Anyone who has worked with students has soon come to realize that teaching is minimal without complementary student behavior such that it becomes part of the structure within which learning takes place. In order to produce a climate conducive for learning, students must manifest self control involving listening, participating, and acceptable behavior in general. It is impossible for learning to take place without discipline (Calabresa, 1965).

SIGNIFICANT DISCIPLINE PROBLEMS AS A DATA BASE

A series of discipline problems identified in a study by Black et al. (1975) was used as the data base for the development of an instrument (DPI) discussed in detail in Chapter 3. According to Black et al. (1975:7):

> The general strategy of the study was to establish predictor constructs by assessing the teachers' attitudes toward and perceptions of their own instructional and non-instructional tasks and their students' problem behavior, assessing the students' attitudes toward and perceptions of their teacher's behavior, and by obtaining self-report biographic and demographic data from the teachers.

Five rating-scale instruments were developed and refined. Prior to the study, the instruments had been developed and tested with a nationwide population of distributive education teachers. The information collected from instrument four was of most importance to this study.

Instrument four contained 140 items of student behavior problems which were obtained from a study of the literature and previous research and then submitted to a panel of teachers for revision. When the instrument was distributed to the respondents:

> Each item was rated on three 5-point Likert-type scales: (1) the perceived importance of each item (i.e., whether the behavior was viewed as good or bad, and to what degree of seriousness), (2) the perceived frequency with which the teacher encountered the behavior, and (3) the perceived effectiveness of the teacher at dealing with the behavior (Black, 1975:7).

Since the present study dealt only with the frequency of discipline problems occurring in the classroom and not the importance of the problems nor the effectiveness of the teacher at dealing with the problems, the behavior problems contained in the F-Scale (frequency scale) were used as a data base for this study. The data contained in the F-Scale were factor analyzed with all 140 items included in the analysis. The behavior problems with salient loadings $\geq .38$ were retained into seven factors presented in Appendix A. Of the 140 original items, seventy-nine behavior problems were contained in these seven factors. These seventy-nine behavior problems (with the exclusion of five) served as a data base for the development of the Frequency Assessment of Discipline Problems Instrument (DPI).

SUMMARY

The distinction between the open and closed minded individual was made in this chapter. It is significant to note that authority and general intolerance are outstanding features of the closed minded person and that others are judged by the closed minded person to the

extent of their agreement or disagreement with authority. Evidence was presented that students in general seem to resent and reject authority figures. Hoy (1965) and Heineman (1971) found that significant relationships exist between dogmatism and PCI; low levels of dogmatism were found to be significantly related to humanistic PCI and high levels of dogmatism were found to be significantly related to custodial PCI. By definition, a closed minded, authoritarian (high dogmatic) teacher, likely to be rejected by students, matches a custodial classroom atmosphere prone to increase the frequency of discipline problems. Inversely, an open minded, non-authoritarian (low dogmatic) teacher, likely to be accepted by students, matches a humanistic classroom atmosphere prone to decrease the frequency of discipline problems. The research leading to the above concept, prompted inquiring the relationship between the level of dogmatism and the frequency of discipline problems occurring in the classroom. Age and experience were considered important variables because new teachers listed classroom management as their number-one problem and more experienced teachers were not found to be more custodial than less experienced teachers. Possibly, younger, less experienced teachers, are more custodial and are subsequently confronted with a higher frequency of discipline problems. The type of school was investigated because a high percentage of urban schools have experienced disruption. It was reported that many urban schools have hired security guards and taken other security measures. It was pointed out that low pupil/teacher ratio is important

for more personalized, tailored instruction; therefore class size was considered an important variable. Myers (1951) reported that industrial arts sometimes lends itself to more difficult situations than traditional courses where students remain seated most of the classroom period. Not only do industrial arts courses differ from traditional courses, but a variety of programs and types of laboratories are employed in industrial arts. Since this study included only industrial arts teachers, the type of laboratory and program were considered worthy of investigation. The concept was discussed that children are immature regardless of how knowledgeable they seem at times and that antiadult behavior is a childhood characteristic. Hence, grade level was considered a meaningful variable to investigate. Finally, a discussion of the study used as a data base for the DPI was presented.

Chapter 3

RESEARCH METHODOLOGY

INTRODUCTION

The problem in this study was to determine what relationships exist among teacher perceived frequency of discipline problems occurring in secondary industrial arts classrooms or laboratories, level of teacher dogmatism, and selected demographic variables. The research design employed in this study was ex post facto. In research studies where the investigator observes the dependent variables and then studies the independent variables after the fact seeking relationships to the dependent variables, the research design is termed ex post facto. Kerlinger (1964:360) defined ex post facto research as:

> . . . that research in which the independent variable or variables have already occurred and in which the researcher starts with the observation of a dependent variable or variables. He then studies the independent variables in retrospect for their possible relations to, and effects on, the dependent variable or variables.

Although the independent variables cannot be manipulated, much ex post facto research must be done in psychology, sociology, and education. Important variables such as intelligence, aptitude, home background, parental upbringing, teacher personality, and school atmosphere need to be researched, but they cannot be manipulated. Many important social, scientific, and educational research problems do not lend themselves to

experimental research designs, but rather lend themselves to an ex post facto design (Kerlinger, 1964).

The independent variables (dogmatism and demographic variables) were viewed retrospectively and the investigator had no control over the variables nor was any treatment introduced. All the variables considered, including the dependent variables (frequency of discipline problems), were assessed through a pencil and paper instrument. The primary factors of the study which follow are: population and sample, instrumentation, administration of instruments, hypotheses to be tested, and tabulation of the data.

POPULATION AND SAMPLE

The population consisted of the industrial arts teachers in the state of Virginia. The total number of industrial arts teachers during 1975-76 was 953. In order to represent the population as near as possible, a random sample was taken totaling 211 teachers. The sample size was derived using the following formula recommended by the NEA Research Division (1960):

$$n = [X^2N\pi(1-\pi)] \div [d^2(N-1) + X^2\pi(1-\pi)]$$

where:

n = the required sample size

X^2 = the table value of chi-square for one degree of freedom and desired confidence level (90%) (2.706)

N = the population (953)

π = the population proportion which it is desired to estimate (assumed to be .50 since this would provide the maximum sample size)

d = the degree of accuracy expressed as a proportion (.05).

The proportion of teachers to the number of variables was also a consideration in determining the sample size due to the number of variables tested in this study. When regression analysis is employed for analysis of data, some researchers recommend a ratio of six to ten subjects for each variable under study. This criterion was met for the present study and no more than four variables were calculated in any regression equation.

INSTRUMENTATION

Dogmatism Scale

The purpose of the Dogmatism Scale (DS) was to measure differences in openness and closedness of belief systems. Because of the way the scale was constructed, it also serves as a measure of general authoritarianism and general intolerance (Rokeach, 1960). Heineman (1971:26) reported that:

> Closely related to the study of dogmatism is the literature concerning authoritarianism. Authoritarianism is closely related to dogmatism because authoritarianism's primary concern is with the acceptance or rejection of authority while dogmatism implies a level of acceptance and rejection of all kinds of input.

In another study, Hoy (1965) found that the DS effectively identified authoritarian personality types (closed minded individuals) and those individuals had a relatively custodial pupil control ideology as measured by the PCI.

Validity. The validity of the DS was established as a measure of general authoritarianism by testing the left of the center groups and the right of the center groups and by using the "Method of Known Groups." In testing the left of the center groups and the right of the center groups, the results showed on the whole that the DS was a measure of general authoritarianism because both groups scored high on the DS and only the groups to the right of the center scored high on the California F and Ethnocentrism Scales. In the "Method of Known Groups," graduate students in psychology selected high and low dogmatic subjects from among their personal friends or acquaintances. The high dogmatic subjects scored considerably and significantly higher than the low dogmatic subjects on the DS (Rokeach, 1960). According to Kerlinger (1964: 452), Rokeach's work on the DS is "an interesting and psychologically significant example of construct validation."

Reliability. The DS has undergone many changes and revisions since its origin. Five forms have been developed--A, B, C, D, and E. The fourth revision, form D, consisted of sixty-six items. The final forty item scale, form E, containing the best forty items of form D, was employed in this study. The coefficients of internal consistency, corrected by the Spearman-Brown formula, are presented in Table 2 for the various forms (Rokeach, 1960).

Frequency Assessment of Discipline Problems Instrument

The Frequency Assessment of Discipline Problems Instrument (DPI) was designed and developed to assess the frequency of discipline

Table 2

Dogmatism Scale Reliability Scores*

Form	Number Of Items	Group	Reliability
A	57	Mich. State U. I	.70
B	43	New York colleges	.75
C	36	Mich. State U. II	.73
		Mich. State U. III	.71
		Purdue U.	.76
D	66	English colleges I	.91
E	40	English colleges II	.81
		English workers	.78
		Ohio State U. I	.85
		Ohio State U. II	.74
		Ohio State U. III	.74
		Ohio State U. IV	.68
		Ohio State U. V	.71
		Mich. State U. IV	.78
		VA domiciliary	-
			.93
			.84

*Adapted from Rokeach (1960).

problems occurring in the classroom or laboratory. The contents of the DPI are seven areas of discipline problems. Each one of the seven areas contained in the DPI correspond to one of the seven factors on the F-Scale developed in the study by Black et al. (1975) discussed in detail in Chapter 2 (see Appendix A). As indicated in Chapter 2, the data contained in the F-Scale was factor analyzed into seven factors (referred to henceforth as seven areas) totaling seventy-nine discipline problems. Listed below are the seven discipline problem areas:

1. Non-Violent Criminal and Quasi-Criminal Misbehavior: includes discipline problems such as stealing, possessing narcotics, and smoking.

2. Inconsiderate and Negligent Behavior: includes discipline problems such as throwing refuse on floor, coming to class tardy, leaving room before dismissal, and failing to keep in seat.

3. Improper Appearance: includes discipline problems such as wearing clothes too tight, girls wearing skirts too short, and failing to be adequately clean.

4. Horseplay: includes discipline problems such as throwing things at another student, shoving or tripping another student, pulling chair out from under another student, and pulling pranks against another student.

5. Cheating: includes discipline problems such as plagiarizing, cheating on tests, cheating on homework, and cheating on in-class assignments.

6. Violent Criminal and Quasi-Criminal Misbehavior: includes discipline problems such as hitting the teacher, starting fires in

school, possessing alcohol on school property, and turning in false alarms or bomb scares.

7. Verbal and Symbolic Misbehavior: includes discipline problems such as arguing with teacher, calling another student names, verbally interrupting while teacher is talking, and answering questions in a humorous, disruptive way.

Validity. Since the original respondents to the F-Scale were teachers in trade and industrial education, business and office education, and home economics and not industrial arts, the seven discipline problem areas were rated as to their relevance and importance to industrial arts in Virginia by a panel of experts. The panel was composed of three industrial arts teachers, three local industrial arts supervisors, three state industrial arts supervisors, and three teacher educators from Virginia (see Appendix B). These individuals were chosen because of their experience and service in teaching, supervising, and providing leadership in industrial arts. Using a seven point semantic differential scale, the panel of experts rated the seven discipline problem areas from very important to very unimportant relative to industrial arts classrooms and laboratories. Six of the seven areas were rated near the mean rating or better. One area was rated lower; however since construct validity was established for each area as described below, all seven areas were included in the DPI. Therefore, content validity was considered satisfactory for this study.

As mentioned previously, the contents of the DPI were factor analyzed into the seven discipline problem areas thereby establishing

construct validity. Kerlinger (1964:453-54) stated that factor analysis is one technique for establishing construct validity in that it:

> . . . is a method for reducing a large number of measures to a smaller number of measures (factors) by discovering which measures 'go together' (which measures measure the same thing) and the relations between those clusters of measures that go together.

Reliability. The test-retest method was employed to establish coefficients of stability for the DPI. Using the SAS correlation coefficient computer program, coefficients of stability were established. The subjects participating in the testing were thirty-eight Virginia industrial arts teachers attending the Virginia Industrial Arts Summer Conference at Virginia Polytechnic Institute and State University. One objective established prior to the testing sessions was to test a minimum of thirty-five teachers. After thirty-eight teachers responded affirmatively to a request to participate in the testing, the number was considered sufficient. All participants were present at both testing sessions. The reliability scores are presented in Table 3 for each discipline area.

Demographic Data Instrument

The purpose of the Demographic Data Instrument (DD) was to collect the independent variable data except the level of teacher dogmatism. As mentioned previously, a total of eight independent variables were researched in this study. The DDI was designed to collect data on seven of the independent variables, namely: teacher age, teaching experience (number of years), class size, type of program, type of laboratory, type of school, and grade level taught.

Table 3

Frequency Assessment of Discipline Problems
Instrument Reliability Scores

Discipline Problem Areas	Reliability
1. Non-Violent Criminal and Quasi-Criminal Misbehavior	.74
2. Inconsiderate and Negligent Behavior	.80
3. Improper Appearance	.74
4. Horseplay	.64
5. Cheating	.84
6. Violent Criminal and Quasi-Criminal Misbehavior	.77
7. Verbal and Symbolic Misbehavior	.74

In reference to the above variables, each respondent was asked to indicate the average number of students taught per class as well as the grade level (7-8, 9-10, 11-12) most often taught. Each respondent was asked to indicate if the type program taught was innovative, traditional, or both, and if the type of laboratory was general, general unit, or unit. Finally, each respondent was asked to indicate, based on his or her judgement, if the school was rural or urban.

ADMINISTRATION OF INSTRUMENTS

The administration of instruments was completed through correspondence. A three step plan of action was used in the administration of the instruments:

1. The 211 teachers randomly selected as the sample were located in sixty-four different school systems. After the sample was selected, each of the sixty-four school system superintendents was written a letter indicating that one or more industrial arts teacher(s) had been selected from his school system to participate in this study (see Appendix C). The letter explained the nature of the study, insured confidentiality of data, and asked permission to involve the selected teacher(s) in this study. Two superintendents responded negatively, withdrawing a total of seven teachers from the sample. Seven alternate teachers were randomly selected who were coincidentally employed by the one of the remaining sixty-two school systems.

2. Two weeks after the superintendents were contacted, a complete packet of information was mailed to the 211 respondents. Enclosed

in the packet was a cover letter (see Appendix C) briefly explaining the nature of the study, a guarantee to keep all responses confidential and all teachers anonymous, a statement of the approximate time required to complete the instruments, and a statement of thanks for their cooperation and assistance. The three instruments (DS, DPI, and DD) (see Appendix D), a self-addressed, stamped envelope, and a financial incentive of fifteen cents were also enclosed.

3. Two weeks after the mailing of the packet, a post card (see Appendix C) was mailed to the teachers who had not responded. The purpose of this mailing was to remind them of the initial request. The post card cordially informed them that the instrument had not been received, pointed out the importance of their response, and again asked for their cooperation in completing and returning the instrument.

HYPOTHESES TO BE TESTED

Although several combinations concerning teacher dogmatism and discipline problems were considered, only one hypothesis (Hypothesis I) was made solely concerning dogmatism and discipline problems. The connotation of the word "positively" in Hypothesis I below is meant to imply that teachers having a higher level of dogmatism will have a greater frequency of discipline problems. The seven demographic variables, teacher age, teaching experience (number of years), class size, type of program, type of laboratory, type of school, and grade level taught, were the basis for the formulation of Hypothesis II through VIII.

Hypothesis IX was formulated in order to test the multiple effects of any of the variables. The nine research hypotheses, stated in the null form, tested in this study are listed below with each respective null and alternative statistical hypothesis.

Hypothesis I:

The level of teacher dogmatism is not positively related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory.

H_0: $\rho = 0$

H_1: $\rho \neq 0$

Hypothesis II:

Teacher age is not related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory.

H_0: $\rho = 0$

H_1: $\rho \neq 0$

Hypothesis III:

Teaching experience (number of years) is not related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory.

H_0: $\rho = 0$

H_1: $\rho \neq 0$

Hypothesis IV:

Class size is not related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory.

H_0: $\rho = 0$

H_1: $\rho \neq 0$

Hypothesis V:

The type of program (innovative or traditional) is not related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory.

H_0: $\rho = 0$

H_1: $\rho \neq 0$

Hypothesis VI:

The type of laboratory (general, general unit, or unit) is not related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory.

H_0: $\rho = 0$

H_1: $\rho \neq 0$

Hypothesis VII:

The type of school (urban or rural) is not related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory.

H_0: $\rho = 0$

H_1: $\rho \neq 0$

Hypothesis VIII:

The grade level taught (7-8, 9-10, or 11-12) is not related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory.

H_0: $\rho = 0$

H_1: $\rho \neq 0$

Hypothesis IX:

Multiple relationships do not exist among the variables, level of teacher dogmatism, teacher age, teaching experience, class size, type of program, type of laboratory, type of school, grade level taught, and frequency of discipline problems in each of the seven problem areas occurring in the classroom or laboratory.

H_0: $\rho = 0$

H_1: $\rho \neq 0$

In order to test the nine hypotheses of the study two statistical techniques were employed. Hypothesis I through Hypothesis VIII were tested by computing the Pearson Product Moment Correlation Coefficient. Hypothesis IX was tested using stepwise multiple regression analysis. Hypothesis I, being a directional hypothesis, was tested using a one-tailed test and Hypothesis II through Hypothesis IX, being non-directional, were tested with a two-tailed test. The predetermined significance levels were .025 and .005 for the one-tailed test and .05 and .01 for the two-tailed tests.

TABULATION OF THE DATA

The data was analyzed by computer, using equipment available at the Virginia Polytechnic Institute and State University Computer Center. Instruments were scored manually and the data was transferred onto computer cards to facilitate analysis. The result of each test is presented in the next chapter.

SUMMARY

The research design and its justification were described in this chapter. The procedure used in deriving the sample size from the population was explained. Reliability and validity of the DS and DPI were presented including process of developing the DPI. The plan used in the administration of the instruments and the statistical methods for testing the hypotheses were also described.

Chapter 4

ANALYSIS OF THE DATA

INTRODUCTION

The intent of this chapter was to present the statistical analysis of the data collected. As described in Chapter 3, the sample was composed of 211 industrial arts teachers. Each teacher was mailed a packet of information which included three instruments to be completed and returned. Of the 211 teachers, 176 responded yielding a return of 83 percent. Three of the 176 instruments returned were unusable; therefore, the data analysis is based on 173 responses, an 82 percent return.

Two statistical techniques were employed for testing the hypotheses. Hypotheses I through VIII were tested by computing the Pearson Product Moment Correlation Coefficient yielding zero order correlations; and Hypothesis IX was tested using stepwise multiple regression analysis. Hypotheses I through VIII were formulated to determine if significant relationships exist among seven discipline problem areas (dependent variables) and the following independent variables: (1) level of teacher dogmatism, (2) teacher age, (3) teaching experience, (4) class size, (5) type of program, (6) type of laboratory, (7) type of school, and (8) grade level taught. Hypothesis IX was formulated

to determine if multiple relationships exist among the above independent variables and the seven discipline problem areas referred to as: (1) non-violent criminal and quasi-criminal misbehavior, (2) inconsiderate and negligent behavior, (3) improper appearance, (4) horseplay, (5) cheating, (6) violent criminal and quasi-criminal misbehavior, and (7) verbal and symbolic misbehavior. The remaining sections of this chapter include discussions of the statistical treatment, testing of the hypotheses, and summary.

STATISTICAL TREATMENT

As previously stated, the two techniques used to analyze the data were Pearson Product Moment Correlation Coefficients and stepwise multiple regression. The Pearson technique was selected because the product (zero order correlation) is a measure of relationship between two variables. The size of the coefficient (r) varies from +1 through 0 to -1. Correlation coefficients indicate two factors: magnitude and direction of the relationship. A correlation of -.88 is the same size as one of +.88. However, a positive correlation implicitly denotes that as one variable increases, the other also increases. Inversely, if one variable increases as the other decreases, the direction is negative. It should be pointed out that the Pearson r is not a measure of causality, although in some cases a causal relationship may exist (Downie, 1970). Therefore, since correlations were necessary to test Hypotheses I through VIII, the Pearson r was computed and used for the

testing thereof. The Pearson r's and the levels of significance were calculated by computer using the SAS Correlation Coefficient Computer Program.

In order to test the final hypothesis, multiple regression analysis (MRA) was selected because it is a sophisticated statistical technique for determining the multiple effects of more than one independent variable on one dependent variable. Multiple regression analysis, according to Kerlinger (1973:631):

> . . . can be conceived as a refined and powerful method of 'controlling' variance. It accomplishes this the same way analysis of variance does: by estimating the magnitudes of different sources of influence on Y, different sources of variance of Y, through analysis of the interrelations of all the variables. It tells how much of Y is presumably due to X_1, X_2 . . ., X_k. It gives some idea of the relative amounts of influence of the X's. And it furnishes tests of the statistical significance of combined influences of X's on Y and of the separate influence of each X. In short, multiple regression analysis is an efficient and powerful hypothesis--testing and influence--making technique, since it helps the scientist study, with relative precision, complex interrelations between independent variables and a dependent variable, and thus helps him to 'explain' the presumed phenomenon represented by the dependent variable.

The fundamental prediction equation for multiple regression analysis is as follows:

$$Y' = a + b_1X_1 + b_2X_2 + . . . + b_kX_k$$

where

Y' = predicted scores of the dependent variable

a = intercept constant

b_1, b_2, . . . b_k = partial regression coefficients

X_1, X_2, . . . X_k = independent variables

Using the SAS Stepwise Multiple Regression Analysis Computer Program, a regression model was formulated for each dependent variable (discipline problem area [Y]) consisting of the best predictors (independent variables [X's]), partial regression coefficients (b's), and the intercept constant (a). Presented in each model is the "F" value and its level of significance for the total regression equation along with each dependent variable (X) and its respective level of significance. Also presented in each model is R^2 (coefficient of determination) which is the percent of composite variance explained by the independent variables in the equation. To obtain the percent of variance explained by a single independent variable, refer to Appendix E and square the correlation coefficient (r) between the independent and dependent variable.

If the statistically significant relationships had existed among all the independent variables and one dependent variable, the regression model would have contained eight independent variables. The regression equation would have been as follows:

$$Y' = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8$$

where

Y' = predicted score for one of the seven discipline problem areas

a = the intercept constant

$b_1, \ldots b_8$ = partial regression coefficients

X_1 = level of teacher dogmatism

X_2 = teacher age

X_3 = teaching experience

X_4 = class size

X_5 = type of program

X_6 = type of laboratory

X_7 = type of school

X_8 = grade level taught

However, no more than a total of four independent variables made a significant contribution to the coefficient of determination and entered any one model. Any independent variable significant at $p < .10$ was permitted to enter the regression equation. The independent variables in each model depicted multiple relationships; thus, this analysis was selected to test Hypothesis IX. Each model will be presented later in this chapter.

TESTING OF THE HYPOTHESES

The first eight hypotheses tested in this study are addressed below. Each hypothesis was designed to determine the relationship between one independent variable and the frequency of discipline problem areas occurring in the classroom or laboratory. The data (correlation coefficients) calculated to test the first eight hypotheses is presented in Appendix E.

The final hypothesis was of a more complex nature. Hypothesis IX was designed to determine if multiple relationships exist among the independent variables and the seven discipline problem areas considered in this study. Seven regression models were calculated to determine

the significant predictor variables (X's) for each discipline problem area. In the following presentation of Hypothesis IX, the regression model is presented and discussed for each respective discipline problem area.

Hypothesis I:

The level of teacher dogmatism is not positively related to frequency of discipline problems in each of the selected seven discipline problem areas occurring in the classroom or laboratory.

H_0: $\rho = 0$

H_1: $\rho \neq 0$

Hypothesis I stated that the level of teacher dogmatism is not related to the frequency of discipline problems occurring in the classroom or laboratory. Using a one-tailed test of significance, the level of teacher dogmatism was found to be positively related to the following discipline problem areas: improper appearance, cheating, and violent criminal and quasi-criminal misbehavior. Therefore, the null hypothesis was rejected for these discipline problem areas. The level of teacher dogmatism was not found to be related to the remaining discipline problem areas: non-violent criminal and quasi-criminal misbehavior, inconsiderate and negligent behavior, horseplay, or verbal and symbolic misbehavior. The correlation coefficients for this analysis are presented in Table 4.

Hypothesis II:

Teacher age is not related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory.

Table 4

Correlation Coefficients Between Level of Teacher Dogmatism and Seven Discipline Problem Areas

Discipline Problem Area	Correlation Coefficients (r)
1. Non-Violent Criminal and Quasi-Criminal Misbehavior	.14
2. Inconsiderate and Negligent Behavior	.08
3. Improper Appearance	.22**
4. Horseplay	.09
5. Cheating	.24**
6. Violent Criminal and Quasi-Criminal Misbehavior	.15*
7. Verbal and Symbolic Misbehavior	.10

* $p < .025$
** $p < .005$

H_0: $\rho = 0$

H_1: $\rho \neq 0$

Hypothesis II stated that teacher age is not related to frequency of discipline problems occurring in the classroom or laboratory. Using a two-tailed test of significance, teacher age was found to be negatively related to violent criminal and quasi-criminal misbehavior. Therefore, the null hypothesis was rejected for this discipline problem area. No relationships were found to exist between teacher age, non-violent criminal and quasi-criminal misbehavior, inconsiderate and negligent behavior, improper appearance, horseplay, cheating, or verbal and symbolic misbehavior. The correlation coefficients for this analysis are presented in Table 5.

Hypothesis III:

Teaching experience (number of years) is not related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory.

H_0: $\rho = 0$

H_1: $\rho \neq 0$

Hypothesis III stated that teaching experience is not related to frequency of discipline problems occurring in the classroom or laboratory. Using a two-tailed test of significance, teaching experience was found to be negatively related to verbal and symbolic misbehavior. Therefore, the null hypothesis was rejected for this discipline problem area. Teaching experience was not discovered to be related to non-violent criminal and quasi-criminal misbehavior,

Table 5

Correlation Coefficients Between Teacher Age and Seven Discipline Problem Areas

Discipline Problem Area	Correlation Coefficients (r)
1. Non-Violent Criminal and Quasi-Criminal Misbehavior	-.007
2. Inconsiderate and Negligent Behavior	.02
3. Improper Appearance	.04
4. Horseplay	-.06
5. Cheating	-.06
6. Violent Criminal and Quasi-Criminal Misbehavior	-.16*
7. Verbal and Symbolic Misbehavior	-.12

* $p < .05$

inconsiderate and negligent behavior, improper appearance, horseplay, cheating, or violent criminal and quasi-criminal misbehavior. The correlation coefficients for this analysis are presented in Table 6.

Hypothesis IV:

Class size is not related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory.

H_0: $\rho = 0$

H_1: $\rho \neq 0$

Hypothesis IV stated that class size is not related to frequency of discipline problems occurring in the classroom or laboratory. Using a two-tailed test of significance, class size was not found to be related to frequency of discipline problems occurring in the classroom or laboratory. Therefore, the null hypothesis failed to be rejected for each discipline problem area. The correlation coefficients for this analysis are presented in Appendix E.

Hypothesis V:

The type of program (innovative or traditional) is not related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory.

H_0: $\rho = 0$

H_1: $\rho \neq 0$

Hypothesis V stated that the type of program is not related to frequency of discipline problems occurring in the classroom or laboratory. Using a two-tailed test of significance, the type of program was not found to be related to frequency of discipline problems occurring

Table 6

Correlation Coefficients Between Teaching Experience and Seven Discipline Problem Areas

Discipline Problem Area	Correlation Coefficients (r)
1. Non-Violent Criminal and Quasi-Criminal Misbehavior	.02
2. Inconsiderate and Negligent Behavior	.0004
3. Improper Appearance	.05
4. Horseplay	-.06
5. Cheating	.02
6. Violent Criminal and Quasi-Criminal Misbehavior	-.06
7. Verbal and Symbolic Misbehavior	-.15*

*$p < .05$

in the classroom or laboratory. Therefore, the null hypothesis failed to be rejected for each discipline problem area. The correlation coefficients for this analysis are presented in Appendix E.

Hypothesis VI:

The type of laboratory (general, general unit, or unit) is not related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory.

H_0: $\rho = 0$

H_1: $\rho \neq 0$

Hypothesis VI stated that the type of laboratory is not related to frequency of discipline problems occurring in the classroom or laboratory. Using a two-tailed test of significance, the unit laboratory was found to be positively related to improper appearance. Therefore, the null hypothesis was rejected for this discipline problem area. The type of laboratory was not found to be related to non-violent criminal and quasi-criminal misbehavior, inconsiderate and negligent behavior, horseplay, cheating, violent criminal and quasi-criminal misbehavior, or verbal and symbolic misbehavior. The correlation coefficients for this analysis are presented in Table 7.

Hypothesis VII:

The type of school (urban or rural) is not related to frequency of discipline problems occurring in the classroom or laboratory. Using a two-tailed test of significance, the urban school was found to be positively related to non-violent criminal and quasi-criminal misbehavior. Therefore, the null hypothesis was rejected for this

Table 7

Correlation Coefficients Between Type of Laboratory and Seven Discipline Problem Areas

Discipline Problem Area	Correlation Coefficients (r)		
	General	General Unit	Unit
1. Non-Violent Criminal and Quasi-Criminal Misbehavior	-.07	.08	.004
2. Inconsiderate and Negligent Behavior	-.04	.09	-.05
3. Improper Appearance	-.14	.005	.15*
4. Horseplay	.07	.06	-.14
5. Cheating	-.02	.05	-.03
6. Violent Criminal and Quasi-Criminal Misbehavior	-.03	.03	.0006
7. Verbal and Symbolic Misbehavior	.06	-.002	-.07

* $p < .05$

discipline problem area. No relationships were determined to exist between type of school, inconsiderate and negligent behavior, improper appearance, horseplay, cheating, violent criminal and quasi-criminal misbehavior, or verbal and symbolic misbehavior. The correlation coefficients for this analysis are presented in Table 8.

Hypothesis VIII:

The grade level taught (7-8, 9-10, or 11-12) is not related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory.

H_0: $\rho = 0$

H_1: $\rho \neq 0$

Hypothesis VIII stated that grade level taught is not related to frequency of discipline problems occurring in the classroom or laboratory. Using a two-tailed test of significance, several relationships were determined. Non-violent criminal and quasi-criminal misbehavior and improper appearance were found to be negatively related to 7-8 grade level and positively related to 9-10 grade level. Finally, horseplay was found to be negatively related to 11-12 grade level, but positively related to 7-8 grade level and cheating was found to be positively related to 9-10 grade level. Therefore, the null hypothesis was rejected for these discipline problem areas. Grade level taught was not found to be related to inconsiderate and negligent behavior, violent criminal and quasi-criminal misbehavior, or verbal and symbolic misbehavior. The correlation coefficients for this analysis are presented in Table 9.

Table 8

Correlation Coefficients Between Type of School and Seven Discipline Problem Areas

Discipline Problem Area	Correlation Coefficients (r)	
	Rural	Urban
1. Non-Violent Criminal and Quasi-Criminal Misbehavior	-.16*	.16*
2. Inconsiderate and Negligent Behavior	-.08	.08
3. Improper Appearance	-.007	.007
4. Horseplay	.01	.01
5. Cheating	.08	-.08
6. Violent Criminal and Quasi-Criminal Misbehavior	-.09	.09
7. Verbal and Symbolic Misbehavior	-.05	.05

*$p < .05$

Table 9

Correlation Coefficients Between Grade Level Taught and Seven Discipline Problem Areas

Discipline Problem Area	Correlation Coefficients (r)		
	7-8	9-10	11-12
1. Non-Violent Criminal and Quasi-Criminal Misbehavior	-.31**	.25**	.08
2. Inconsiderate and Negligent Behavior	-.07	.10	-.04
3. Improper Appearance	-.15*	.15*	-.008
4. Horseplay	.15*	.07	-.26**
5. Cheating	-.10	.17*	-.09
6. Violent Criminal and Quasi-Criminal Misbehavior	-.02	.07	-.05
7. Verbal and Symbolic Misbehavior	.08	.04	-.14

* $p < .05$
** $p < .01$

The composite data analysis for Hypothesis I through Hypothesis VIII is shown in Figure 1.

Hypothesis IX:

Multiple relationships do not exist among the variables, level of teacher dogmatism, teacher age, teaching experience, class size, type of program, type of laboratory, type of school, grade level taught, and frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory.

H_0: $\rho = 0$

H_1: $\rho \neq 0$

The seven discipline problem areas as related to the independent variables are described as follows:

Non-Violent Criminal and Quasi-Criminal Misbehavior - The model formulated for this discipline problem area employed three significant predictor variables: grade level taught (7-8), class size, and level of teacher dogmatism. The coefficient of determination for this model was .1620 and the F-ratio for the total model was significant at the .0001 level. One other variable, type of school (urban), entered the equation, but was not significant at the predetermined .05 level of significance. The regression equation excluding the type of school is as follows:

$$Y' = 8.607 - 1.514X_8 + .080X_4 + .014X_1$$

where

Y' = predicted score for non-violent criminal and quasi-criminal misbehavior

	Non-Violent Criminal and Quasi-Criminal Misbehavior	Inconsiderate and Negligent Behavior	Improper Appearance	Horseplay	Cheating	Violent Criminal and Quasi-Criminal Misbehavior	Verbal and Symbolic Misbehavior	
Dogmatism			+		+	+		Hypothesis 1
Teacher Age						-		Hypothesis 2
Teaching Experience							-	Hypothesis 3
Class Size								Hypothesis 4
Rural School	-							Hypothesis 5
Urban School	+							
Innovative Program								Hypothesis 6
Traditional Program								
Both Programs								
General Lab								Hypothesis 7
General Unit Lab								
Unit Lab			+					
7-8 Grade	-		-	+				Hypothesis 8
9-10 Grade	+		+		+			
11-12 Grade				-				

+ Positive relationship between variables

- Negative relationship between variables

Figure 1

Composite Data Analysis for Hypothesis 1
Through Hypothesis 8

8.607 = the intercept constant

X_8 = grade level taught (7-8)

X_4 = class size

X_1 = level of teacher dogmatism

Therefore, the null hypothesis was rejected for the variables, grade level taught (7-8), class size, and level of teacher dogmatism relative to the non-violent criminal and quasi-criminal misbehavior discipline problem area. The regression analysis for this discipline problem area is presented in Table 10.

Inconsiderate and Negligent Behavior - The model formulated for this discipline problem area employed only one predictor variable, grade level taught (9-10). The coefficient of determination was .0105 and the F-ratio for the total model was not significant at the predetermined .05 level of significance. Therefore, the null hypothesis failed to be rejected relative to the inconsiderate and negligent behavior discipline problem area.

Improper Appearance - The model formulated for this discipline problem area employed three significant predictor variables: level of teacher dogmatism, grade level taught (9-10), and type of laboratory (unit). The coefficient of determination for this model was .1222 and the F-ratio for the total model was significant at the .0004 level. One other variable, type of program (innovative) entered the equation but was not significant at the predetermined .05 level of significance. The regression equation excluding the type of program is as follows:

$$Y' = 11.447 + .024X_1 + 1.123X_8 + .919X_6$$

Table 10

Regression Analysis Between Four Independent Variables* and the Dependent Variable Non-Violent Criminal and Quasi-Criminal Misbehavior

Source	DF	Sum of Squares	Mean Square	F Value	Prob < F	R-Square
Regression	4	156.418	39.104	8.121	.0001	.1620
Error	168	808.970	4.815			
Corrected Total	172	965.387				

Source	DF	Partial SS	F Value	Prob < F	b Values	a intercept
*Grade level taught (7-8)	1	94.978	19.724	.01	-1.514	8.607
*Class size	1	19.701	4.041	.05	.080	
*Level of teacher dogmatism	1	25.495	5.295	.05	.014	
*Type of school (urban)	1	15.111	3.138	.07	.688	

where

Y' = predicted score for improper appearance

11.447 = the intercept constant

X_1 = level of teacher dogmatism

X_8 = grade level taught (9-10)

X_6 = type of laboratory (unit)

Therefore, the null hypothesis was rejected for the variables, level of teacher dogmatism, grade level taught (9-10), and type of laboratory (unit) relative to the improper appearance discipline problem area. The regression analysis for this discipline problem area is presented in Table 11.

Horseplay - The model formulated for this discipline problem area employed only one significant predictor variable, grade level taught (11-12). The coefficient of determination was .0667 and the F-ratio was significant at the .0009 level. However, since only one variable entered the model, multiple relationships do not exist; therefore the null hypothesis failed to be rejected relative to the horseplay discipline problem area.

Cheating - The model formulated for this discipline problem area employed two significant predictor variables: level of dogmatism and grade level taught (9-10). The coefficient of determination for this model was .0953 and the F-ratio for the total model was significant at the .0004 level. The regression equation for this model is as follows:

$$Y' = 14.584 + .037X_1 + 1.606X_8$$

Table 11

Regression Analysis Between Four Independent Variables* and the Dependent Variable Improper Appearance

Source	DF	Sum of Squares	Mean Square	F Value	Prob < F	R-Square
Regression	4	163.433	40.858	5.848	.0004	.1222
Error	168	1173.804	6.987			
Corrected Total	172	1337.237				

Source	DF	Partial SS	F Value	Prob < F	b Values	a intercept
*Level of teacher dogmatism	1	77.077	11.032	.01	.024	11.447
*Grade level taught (9-10)	1	49.136	7.033	.01	1.123	
*Type of laboratory (unit)	1	26.062	3.730	.05	.919	
*Type of program (innovative)	1	24.783	3.547	.06	- .913	

where

Y' = predicted score for cheating

14.584 = the intercept constant

X_1 = level of teacher dogmatism

X_8 = grade level taught (9-10)

Therefore, the null hypothesis was rejected for the variables, level of teacher dogmatism and grade level taught (9-10) relative to the cheating discipline problem area. The regression analysis for this discipline problem area is presented in Table 12.

Violent Criminal and Quasi-Criminal Misbehavior - The model formulated for this discipline problem area employed three significant predictor variables: teacher age, level of teacher dogmatism, and type of school (urban). The coefficient of determination was .0695 and the F-ratio for the total model was significant at the .007 level. The regression equation for the model is as follows:

$$Y' = 15.156 - .064X_2 + .019X_1 + 1.115X_7$$

where

Y' = predicted score for violent criminal and quasi-criminal misbehavior

15.156 = the intercept constant

X_2 = teacher age

X_1 = level of teacher dogmatism

X_7 = type of school (urban)

Therefore, the null hypothesis was rejected for the variables, teacher age, level of teacher dogmatism, and type of school (urban) relative

Table 12

Regression Analysis Between Four Independent Variables* and the Dependent Variable Cheating

Source	DF	Sum of Squares	Mean Square	F Value	Prob < F	R-Square
Regression	2	261.741	130.870	8.950	.0004	.0953
Error	170	2485.774	14.622			
Corrected Total	172	2747.514				

Source	DF	Partial SS	F Value	Prob < F	b Values	a intercept
*Level of teacher dogmatism	1	178.017	12.174	.01	.037	14.584
*Grade level taught (9-10)	1	102.006	6.976	.01	1.606	

to the violent criminal and quasi-criminal discipline problem area. The regression analysis for this discipline area is presented in Table 13.

Verbal and Symbolic Misbehavior - The model formulated for this discipline problem area employed two predictor variables: teaching experience and grade level taught (11-12). The coefficient of determination was .0383 and the F-ratio for the total model was significant at the .04 level. Although the total model equation was significant, neither of the predictor variables were separately significant at the predetermined .05 level of significance. Therefore, the null hypothesis failed to be rejected relative to the verbal and symbolic misbehavior discipline problem.

The composite data analysis for Hypothesis IX is shown in Figure 2.

SUMMARY

The objective of this chapter was to present the statistical analysis of the data collected in this study. The analyses were calculated based on an 82 percent return of the instruments mailed to the sample. Two statistical techniques were employed for the analysis of the data: the Pearson Product Moment Correlation Coefficient and stepwise multiple regression. The Pearson r technique was selected because it measures the relationship between variables and was, therefore, used to test Hypotheses I through VIII. Multiple regression was

Table 13

Regression Analysis Between Three Independent Variables* and the Dependent Variable Violent Criminal and Quasi-Criminal Misbehavior

Source	DF	Sum of Squares	Mean Square	F Value	Prob < F	R-Square
Regression	3	120.437	40.146	4.206	.007	.0695
Error	169	1613.043	9.545			
Corrected Total	172	1733.480				

Source	DF	Partial SS	F Value	Prob < F	b Values	a intercept
*Teacher age	1	65.760	6.890	.01	-.064	15.156
*Level of teacher dogmatism	1	47.757	5.004	.05	.019	
*Type of school (urban)	1	38.378	4.021	.05	1.115	

	Dogmatism	Teacher Age	Teaching Experience	Class Size	Rural School	Urban School	Innovative Program	Traditional Program	Both Programs	General Lab	General Unit Lab	Unit Lab	7-8 Grade	9-10 Grade	11-12 Grade	
Non-Violent Criminal and Quasi-Criminal Misbehavior	+			+									-			Hypothesis 9
Inconsiderate and Negligent Behavior																
Improper Appearance	+											+		+		
Horseplay																
Cheating	+													+		
Violent Criminal and Quasi-Criminal Misbehavior	+	-				+										
Verbal and Symbolic Misbehavior																

\+ Positive relationship between variables

\- Negative relationship between variables

Figure 2

Composite Data Analysis for Hypothesis 9

selected because it is capable of determining multiple relationships between independent variables and their effect on a dependent variable and was therefore used to test Hypothesis IX.

Chapter 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

INTRODUCTION

A lack of discipline has frequently been reported as a major problem in public school systems. The lack of discipline manifests itself in many problem areas; seven were considered in this study: (1) non-violent criminal and quasi-criminal misbehavior, (2) inconsiderate and negligent behavior, (3) improper appearance, (4) horseplay, (5) cheating, (6) violent criminal and quasi-criminal misbehavior, and (7) verbal and symbolic misbehavior. Eight independent variables were carefully studied to determine their relationships with these seven discipline problem areas. The independent variables under study were: (1) level of teacher dogmatism, (2) teacher age, (3) teaching experience (number of years), (4) class size, (5) type of program (innovative or traditional), (6) type of laboratory (general, general unit, or unit), (7) type of school (urban or rural), and (8) grade level taught (7-8, 9-10, or 11-12). The relationships determined among these discipline problem areas and independent variables are explained in the conclusions section of this chapter. The remaining sections of this chapter are summary, conclusions, and recommendations.

SUMMARY

This section presents the major factors involved for the completion of this study. The following factors of the study which follow are: statement of the problem; research questions; research design, population, and sample; instrumentation; statistical treatment; and hypotheses tested.

Statement of the Problem

The problem was to determine what relationships exist among teacher perceived frequency of discipline problems occurring in secondary industrial arts classrooms or laboratories, level of teacher dogmatism, and selected demographic variables.

Research Questions

Based on an extensive review of the literature concerning the independent variables and discipline problems in public schools, the following research questions were formed:

1. Is the level of teacher dogmatism positively related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory?

2. Is teacher age related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory?

3. Is teaching experience (number of years) related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory?

4. Is class size related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory?

5. Is the type of program (innovative or traditional) related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory?

6. Is the type of laboratory (general, general unit, or unit) related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory?

7. Is the type of school (urban or rural) related to frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory?

8. Is the grade level taught (7-8, 9-10, or 11-12) related to frequency of discipline problems in each of the seven discipline areas occurring in the classroom or laboratory?

9. Do multiple relationships exist among the variables, level of teacher dogmatism, teacher age, teaching experience, class size, type of program, type of laboratory, type of school, grade level taught, and frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory?

Research Design, Population, and Sample

The research design employed in this investigation was ex post facto. In research studies where the investigator observes the dependent variables and then studies the independent variables after the fact

seeking relationships to the dependent variables, the research design is termed ex post facto. Both the dependent and independent variables were viewed retrospectively and neither were manipulated by the investigator. All information collected concerning each variable was achieved by means of a pencil and paper instrument.

The population sampled from was the industrial arts teachers in Virginia. Of the 953, 1975-76 industrial arts teachers, 211 were randomly selected for sampling purposes. The sample size was derived using the following formula recommended by the NEA Research Division (1960):

$$n = [X^2 N\pi(1-\pi)] \div [d^2 (N-1) + X^2\pi(1-\pi)]$$

where

n = the required sample size

X^2 = the table value of chi-square for one degree of freedom and desired confidence level (90%) (2.706)

N = the population 953

π = the population proportion which it is desired to estimate (assumed to be .50 since this would provide the maximum sample size)

d = the degree of accuracy expressed as a proportion (.05)

Instrumentation

Three instruments were employed to collect data for this study. The first instrument administered was the Dogmatism Scale (DS). Its purpose was to measure differences in openness and closedness of one's

mind, or the level of dogmatism. The Frequency Assessment of Discipline Problems Instrument (DPI) was the second administered. This instrument was used to assess the frequency of discipline problems in each of the discipline problem areas occurring in the industrial arts classroom or laboratory. The final instrument administered was the Demographic Data Instrument (DD). The purpose of the DD was to collect data relative to the independent variables excluding level of teacher dogmatism.

A complete packet containing the three instruments discussed above was mailed to the sample of 211 industrial arts teachers. Two weeks after the mailing of the packet, a post card was mailed to teachers who had not responded. The purpose of the post card was to remind them of the initial request. Of the 211 teachers included in the sample, 176 responded. Three instruments returned were unusable; therefore, the data analysis was based on 173 respones, an 82 percent return.

Statistical Treatment

Two statistical techniques were used to analyze the data: the Pearson Product Moment Correlation Coefficient and stepwise multiple regression analysis. Hypothesis I through Hypothesis VIII were tested by calculating the correlation coefficient between one independent variable and one dependent variable in each case. Therefore, since correlations (r) were necessary to test the first eight hypotheses, the Pearson r was computed and used for the testing thereof. In order to test Hypothesis IX, multiple regression analysis was selected in that it is capable of determining the multiple effects of more than one

independent variable. The fundamental prediction equation for multiple regression analysis is as follows:

$$Y' = a + b_1X_1 + b_2X_2 + \ldots b_kX_k$$

where

Y' = predicted scores of the dependent variable (discipline problem area score)

a = intercept constant

$b_1, b_2, \ldots b_k$ = partial regression coefficients

$X_1, X_2, \ldots X_k$ = independent variables

Using the equipment available in the Computer Center at Virginia Polytechnic Institute and State University, the correlation coefficients and the multiple regression analysis were computed by means of the SAS Computer Program. Hypothesis I, being a directional hypothesis, was tested at the predetermined significance levels of .025 and .005 with a one-tailed test. Hypotheses II through IX, being non-directional, were tested at the predetermined significance levels of .05 and .01 with a two-tailed test.

Hypotheses Tested

Nine hypotheses were tested in this study. The first eight were tested to determine if relationships exist between the independent variables and seven discipline problem areas. Each hypothesis was designed to determine the relationship between one independent variable and the frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory. The final hypothesis was designed to determine if multiple relationships exist among

the independent variables and the seven discipline problem areas considered in this study. Listed below are the findings of the nine hypotheses tested in this study:

Hypothesis I stated that the level of teacher dogmatism is not related to the frequency of discipline problems selected for this study occurring in the classroom or laboratory. However, the discipline problem areas, improper appearance, cheating, and violent criminal and quasi-criminal misbehavior were found to be positively related to the level of teacher dogmatism. Therefore, the null hypothesis was rejected for these discipline problem areas, but was not rejected for non-violent criminal and quasi-criminal misbehavior, inconsiderate and negligent behavior, horseplay, and verbal and symbolic misbehavior.

Hypothesis II stated that teacher age is not related to frequency of discipline problems occurring in the classroom or laboratory. Teacher age was found to be negatively related to only one discipline problem area: violent criminal and quasi-criminal misbehavior. Hence, the null hypothesis was rejected for this discipline problem area, but was not rejected for the remaining six areas.

Hypothesis III stated that teaching experience is not related to frequency of discipline problems occurring in the classroom or laboratory. A negative relationship was found to exist between teaching experience and verbal and symbolic misbehavior. Therefore, the null hypothesis was rejected for this discipline problem area, but was not rejected for the remaining six areas.

Hypothesis IV stated that class size is not related to frequency of discipline problems occurring in the classroom or laboratory. The null hypothesis was not rejected in that class size was not found to be related to any of the seven discipline problem areas.

Hypothesis V stated that the type of program (innovative or traditional) is not related to frequency of discipline problems occurring in the classroom or laboratory. As in the previous case, the null hypothesis was not rejected since the type of program was not related to any of the seven discipline problem areas.

Hypothesis VI stated that the type of laboratory (general, general unit, or unit) is not related to frequency of discipline problems occurring in the classroom or laboratory. The unit laboratory was found to be positively related to improper appearance. Thus, the null hypothesis was rejected for this discipline problem area, but failed to be rejected for the other six discipline problem areas.

Hypothesis VII stated that the type of school (urban or rural) is not related to frequency of discipline problems occurring in the classroom or laboratory. The urban school was found to be positively related to non-violent criminal and quasi-criminal misbehavior. The null hypothesis was rejected for this discipline problem area and was not rejected for the remaining six discipline problem areas.

Hypothesis VIII stated that grade level taught is not related to frequency of discipline problems occurring in the classroom or laboratory. Several relationships were found to exist in this case.

Non-violent criminal and quasi-criminal misbehavior and improper appearance were found to be related negatively to 7-8 grade level and positively related to 9-10 grade level. Finally, horseplay was found to be negatively related to 11-12 grade level, but positively related to 7-8 grade level and cheating was found to be positively related to 9-10 grade level. Therefore, the null hypothesis was rejected for these four discipline problem areas, but failed to be rejected for inconsiderate and negligent behavior, violent criminal and quasi-criminal misbehavior, and verbal and symbolic misbehavior.

Hypothesis IX stated that multiple relationships do not exist among the variables, level of teacher dogmatism, teacher age, teaching experience, class size, type of program, type of laboratory, type of school, grade level taught, and frequency of discipline problems in each of the seven discipline problem areas occurring in the classroom or laboratory.

Non-Violent Criminal and Quasi-Criminal Misbehavior - Multiple relationships were found to exist between this discipline problem area and the variables: 7-8 grade level, class size, and level of teacher dogmatism. Therefore the null hypothesis was rejected for this discipline problem area relative to the named variables.

Inconsiderate and Negligent Behavior - This discipline problem area was not found to be related in a multiple relationship with any of the independent variables. Based on the lack of multiple relationship, the null hypothesis was not rejected for this discipline problem area.

Improper Appearance - This discipline problem area was discovered to be related with the variables: level of teacher dogmatism, 9-10 grade level, and unit laboratory. Based on these findings, the null hypothesis was rejected for this discipline problem area relative to the named variables.

Horseplay - No multiple relationships were determined between horseplay and any of the independent variables. Hence, the null hypothesis was not rejected for this discipline problem area.

Cheating - Two independent variables were found to be related with cheating: level of teacher dogmatism and 9-10 grade level. Therefore, the null hypothesis was rejected for these two variables only.

Violent Criminal and Quasi-Criminal Misbehavior - Three variables were found to have a multiple relationship with this discipline problem area: teacher age, level of teacher dogmatism, and urban school. The null hypothesis was rejected for these three variables relative to this discipline problem area.

Verbal and Symbolic Behavior - No multiple relationships were determined between this discipline problem area and any of the independent variables. Therefore, the null hypothesis was not rejected for this discipline problem area.

CONCLUSIONS

The major attempt in this study was to determine if the level of teacher dogmatism (the extent to which one is opened or closed minded) is related to the frequency of discipline problems occurring in

the industrial arts instructional environment. Other variables were also investigated as to their relationship with the frequency of discipline problems occurring in the classroom or laboratory. Certain significant relationships were discovered and the conclusions drawn from these relationships are presented in the remainder of this section.

It was determined in this study that the level of teacher dogmatism, independently, is related to certain discipline problem areas. Of seven discipline problem areas investigated in this study, the level of teacher dogmatism was found to be related to three: improper appearance, cheating, and violent criminal and quasi-criminal misbehavior. One other area, non-violent criminal and quasi-criminal misbehavior, was closely related, but not at the predetermined level of significance. The discipline problems included in these areas are presented in Appendix A. To expand the context further, as a teacher's level of dogmatism increases, he/she is apt to perceive discipline problems to a greater extent than an open minded teacher, especially in the discipline problem areas named above. It was also determined that the level of teacher dogmatism has multiple relationships with other variables which may contribute to the frequency of discipline problems occurring in the classroom or laboratory. The level of teacher dogmatism in conjunction with class size was found to be related to non-violent criminal and quasi-criminal misbehavior. For example, teachers with a higher level of dogmatism who are teaching large classes may perceive a greater amount of non-violent criminal and quasi-criminal misbehavior. Class size was not related to any other discipline problem area. The level of teacher dogmatism in conjunction with the variables, unit laboratory and 9-10 grade

level, was found to be related to the discipline problem area, improper appearance. In this case, a teacher having a higher level of dogmatism, teaching ninth and/or tenth grade level, unit laboratories may perceive improper appearance as a greater discipline problem. The type of laboratory was not found to be associated with any other discipline problem area. The level of teacher dogmatism in conjunction with the 9-10 grade level was discovered to be related to cheating. For example, a teacher with a higher level of dogmatism teaching ninth and/or tenth grade level may perceive more cheating by students than an open minded teacher. Finally, the level of teacher dogmatism in conjunction with the variable, urban school, was found to be related to violent criminal and quasi-criminal misbehavior. Therefore, more dogmatic teachers in urban schools are apt to perceive more violent discipline problems than dogmatic teachers in rural schools. It is significant to note that three of the four discipline problem areas associated with teacher dogmatism are not overt discipline problem areas. As indicated in the literature review, a dogmatic, closed minded teacher is very authoritative and likely to be rejected by students. The case may be such that the dogmatic teacher is so rigid and suppressive that students may commit more non-violent and non-verbal discipline problems as acts of rejection or protest. Students would more nearly be reprimanded for violation of the more overt discipline problem areas.

As a single independent variable, urban school was found to be related to non-violent criminal and quasi-criminal misbehavior. Therefore, urban schools seem not only to have more violent discipline

problems, but seem to have more non-violent problems as well. It should be pointed out that the rural/urban variable was based on a subjective judgement by each respondent.

As one might expect, the variables teacher age and teaching experience were highly correlated. However, they were each related to only one discipline problem area. Teacher age was negatively related to violent criminal and quasi-criminal misbehavior and teaching experience was determined to be negatively related to verbal and symbolic misbehavior. In order to further clarify this, it appears that as a teacher becomes older the frequency of violent criminal and quasi-criminal discipline problems decreases and the longer a teacher teaches the more the verbal and symbolic misbehavior decreases.

Grade level taught was found to be one of the strongest, independent variables associated with the frequency of discipline problems occurring in the classroom or laboratory. The 7-8 grade level was negatively related to non-violent criminal and quasi-criminal misbehavior and improper appearance, but positively related to horseplay. This indicates that the younger students (7-8 grade) would seem not to violate rules such as the dress code or stealing property belonging to others, but would tend to violate rules concerning overt behavior such as tripping, shoving, or hitting other students. In further support, the 11-12 grade level was found to be negatively related to horseplay. On an independent basis, the 9-10 grade level was found to be related to non-violent criminal and quasi-criminal misbehavior, improper appearance, and cheating. It appears that more discipline problems are

perceived at the 9-10 grade level and they seem to be of a subtle nature, the same type perceived by the dogmatic teacher as mentioned previously. The type of program was not found to be related to any of the discipline problem areas and was, therefore, concluded as not being associated with the frequency of discipline problems occurring in the classroom or laboratory.

Finally, it appears that the level of teacher dogmatism was the independent variable most related to the frequency of discipline problems occurring in the classroom or laboratory. The next nearest related independent variable was 9-10 grade level taught. The level of dogmatism was a significant predictor variable in all four of the regression models established. The 9-10 grade level was included in two of the models. The regression equations for the models with significant relationships were presented in Chapter 4.

RECOMMENDATIONS

Certain independent variables have been determined to be related to frequency of discipline problems occurring in the classroom or laboratory. The author recommends that this study be replicated in other areas, using English or math teachers as the sample, for example. Furthermore this concept should be researched focusing especially on urban schools and the 9-10 grade level, the type of school and grade level where more discipline problems seem to exist. More research should also be done concerning the four discipline problem areas found to be related to the level of teacher dogmatism: non-violent criminal and quasi-criminal

misbehavior, improper appearance, cheating, and violent criminal and quasi-criminal misbehavior. The level of student dogmatism was a variable not considered in this study. The author recommends that further research be conducted on discipline problems including the level of student dogmatism as a variable. The case may be that closed minded students accept the authoritarian teacher eliminating many discipline problems and conversely open minded students may reject the closed minded teacher creating many discipline problems.

Finally, it is recommended that two other areas be researched: teacher placement and inservice education. A teacher's level of dogmatism, if known before placement, might be instrumental in avoiding certain areas of discipline. For example, this study indicated that more discipline problems are associated with the ninth and tenth grade level. Therefore since dogmatism is also associated with discipline problems, it might be well to place a dogmatic teacher above or below the ninth and tenth grade. Hoy (1965:74-75) stated:

> If more effective teachers are to be selected for a particular position, the use of instruments to measure personality structure along the dimension of open mindedness and to measure pupil control ideology might be employed in the selection process.

To carry the process one step further, public school systems might lower their discipline problems by placing dogmatic teachers in schools with "fewer problems" or a rural school when possible.

Research has shown that one's level of dogmatism may be adjusted downward through increasing education. Based on the findings of this study, higher levels of dogmatism are related to higher frequencies of

discipline problems. Therefore, it seems appropriate that industrial arts teachers receive more inservice education, in turn lowering their levels of dogmatism, and be confronted with fewer discipline problems as a result. A simulated method of inservice education is recommended for this purpose. To expand, teachers might participate in workshops or seminars designed to present techniques for teachers to use when confronted with discipline problems. The teachers might play simulated roles and practice incorporating open minded techniques in dealing with the types of problems they encounter. Hopefully, the teachers would be better prepared to solve their discipline problems after the simulated experience in the workshop.

SUMMARY

This chapter presented in summary form the major factors involved for the completion of this study. The first section presented the statement of the problem; research questions; research design, population, and sample; instrumentation; statistical treatment; and hypotheses tested. The second section presented the conclusions drawn from the data analysis and hypotheses tested in Chapter 4. Finally, the last section presented the recommendations based on the conclusions.

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APPENDIXES

APPENDIX A

DISCIPLINE PROBLEMS CONTAINED IN THE SEVEN ROTATED FACTORS OF THE F-SCALE

Discipline Problems Contained in the Seven Rotated Factors of the F-Scale

FACTOR NAME: Non-Violent Criminal and Quasi-Criminal Misbehavior	LOADING
Stealing materials from school.	.55
Stealing tools, materials, or supplies from laboratory areas.	.53
Possessing narcotics on school property.	.50
Smoking on school grounds.	.49
Stealing from another student.	.44
FACTOR NAME: Inconsiderate and Negligent Behavior	**LOADING**
Throwing refuse on floor.	.58
Deliberately dropping books or other objects in class.	.55
Coming to class tardy.	.52
Refusing to participate in class activities or assignments.	.48
Failing to put away materials after use.	.46
Putting books or papers away too soon.	.46
Leaving room before dismissal.	.46
Failing to keep their seats in class.	.44
Failing to follow directions for assignment.	.44
Leaving laboratory or storage area messy.	.44
FACTOR NAME: Improper Appearance	**LOADING**
Wearing clothes too tight.	.83
Girls wearing skirts too short.	.83
Wearing inappropriate clothing to school (e.g., low cut dresses, lame jackets, etc.).	.80
Having arms around each other outside of class on school property.	.47
Making noise in the halls.	.45
Kissing outside of class on school property.	.44
Failing to be adequately clean.	.43
FACTOR NAME: Horseplay	**LOADING**
Throwing things at another student.	.70
Spitting.	.67
Shoving or tripping another student.	.63
Pulling chair out from under other students.	.57

Hitting another student.	.56
Expelling gas in class.	.54
Excessive belching in class.	.52
Throwing tools, materials, or equipment about the laboratory.	.52
Reading or possessing obscene books or pornographic materials in class.	.49
Throwing water.	.47
Pulling pranks against another student.	.46
Drawing picture to poke fun at another student.	.46
Destroying or defacing another student's property.	.46
Throwing erasers, pencils, books, etc., in class.	.45
Calling another student names.	.45
FACTOR NAME: Cheating	LOADING
Cheating on in-class assignment.	.78
Cheating on homework.	.72
Copying work from nearby students.	.70
Copying assignments from other students.	.61
Cheating on tests.	.51
Failing to complete homework.	.47
Plagiarizing.	.45
Consistently losing books, assignments, etc.	.45
Excessive complaining about feeling ill (hypochondriac).	.42
FACTOR NAME: Violent Criminal and Quasi-Criminal Misbehavior	LOADING
Consuming alcohol in classroom or laboratory area.	.82
Hitting the teacher.	.73
Possessing brass knuckles, molotov cocktails, etc., on school property.	.70
Lodging objects in electric receptacles.	.58
Failing to leave building during fire drill.	.56
Starting fires in school.	.55
Whispering, or nonverbally communicating at inappropriate times.	.52
Possessing stolen goods (not stolen from school, teacher or students).	.52
Possessing alcohol on school property.	.51
Making passes at teacher or getting fresh with teacher.	.50

Intentionally injuring one's self.	.47
Turning in false alarms or bomb scares.	.45
FACTOR NAME: Verbal and Symbolic Misbehavior	LOADING
Making fun of mistakes of other students.	.70
Making fun of another student.	.67
Verbally interrupting a student while he is talking to teacher in class.	.65
Calling another student names.	.59
Arguing with teacher.	.58
Destroying or defacing another student's property.	.58
Verbally interrupting when teacher is talking.	.56
Student dominating the class discussions.	.51
Pulling pranks against another student.	.48
Reading, writing, etc., while teacher is talking.	.44
Making allusions to sex (written or verbal).	.43
Clicking pens, or making other similar noises with small objects.	.42
Pointing out teacher's mistakes.	.42
Answering question in humorous, disruptive way.	.41
Lying to teacher with the intent to deceive (not fantasy).	.41
Deliberately trying to upset the teacher by misbehaving.	.40

APPENDIX B

PANEL OF EXPERTS

Panel of Experts

Industrial Arts Teachers

Mr. Leon Copeland
Oscar Smith High School
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Dr. Arvid W. Van Dyke
Associate Professor
Department of Industrial Arts
and Vocational Education
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Virginia State College
Petersburg, Virginia 23803

APPENDIX C

CORRESPONDENCE

COLLEGE OF EDUCATION

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Blacksburg, Virginia 24061

DIVISION OF VOCATIONAL & TECHNICAL EDUCATION

February 4, 1976

Dear Superintendent:

One or more Industrial Arts teachers in your school system has been chosen to participate in a study concerning discipline problems in the public schools. The purpose of the study is to examine the relationship between the level of teacher dogmatism and the frequency of discipline problems occurring in the classroom.

The teacher will only be asked to complete one instrument (fifteen minutes) and return it to us by mail. His response will be treated confidentially and no individual or school will be named in this study. In order to obtain more valid information about discipline problems, we would like to request permission to involve your school district in this study. If we do not hear from you within one week, we will assume that you have no objections. Many thanks for your cooperation in this matter. If you have any questions, please call Gary Puckett at 703-951-6384.

Sincerely yours,

William E. Dugger, Jr., Chairman
Industrial Arts Education

Gary Puckett, Graduate Student
Industrial Arts Education

T. A. Hughes, Jr.

Thomas A. Hughes, Jr., State Supervisor
Industrial Arts Education
State Department of Education

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Enclosures

COLLEGE OF EDUCATION

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Blacksburg, Virginia 24061

DIVISION OF VOCATIONAL & TECHNICAL EDUCATION

February 19, 1976

As an Industrial Arts Teacher from Virginia, you have been chosen as one of a select group to participate in a study concerning discipline problems in the public schools. In order to obtain more valid information about discipline problems, we are asking that you complete the instrument as soon as practicable. A self-addressed stamped envelope is enclosed for your convenience.

The instrument has been pilot tested by industrial arts teachers and takes an average of fifteen minutes to complete Parts I, II, and III. Your response will be treated confidentially and no individual or school will be named in this study. Your name is not required on the instrument and the number in the upper right corner is for data processing purposes only. Many thanks for your cooperation and your prompt attention will be greatly appreciated in completing and returning this instrument.

Sincerely yours,

William E. Dugger, Jr., Chairman
Industrial Arts Education

Gary Puckett, Graduate Student
Industrial Arts Education

Thomas A. Hughes, Jr., State Supervisor
Industrial Arts Education
State Department of Education

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Enclosures

P.S. - Your superintendent has been contacted.

Follow-up Post Card

March 8, 1976

As one of a select group of industrial arts teachers from Virginia, you recently received an instrument designed to obtain information about discipline problems in the public schools.

As of this time, we have not received your response and it is most important for the completion of this study. If you have not already done so, the return of the instrument will greatly be appreciated. Many thanks!

William E. Dugger

Sincerely yours,
Gary Puckett

APPENDIX C

INSTRUMENTS

DS Form E

PART I

DIRECTIONS: The following items represent what the general public may think and feel about a number of important social and personal questions. The best answer to each statement below is your personal opinion. Many different opposing points of view are welcomed; you may find yourself agreeing strongly with some of the statements, disagreeing just as strongly with others, and perhaps uncertain about others. Whether you agree or disagree with any statement, you can be sure that many people feel the same as you do. Mark each statement in the left margin according to how much you agree or disagree with it. Please mark every one. Write +1, +2, +3, or -1, -2, or -3, depending on how you feel in each case.

+1:	I AGREE A LITTLE	-1:	I DISAGREE A LITTLE
+2:	I AGREE ON THE WHOLE	-2:	I DISAGREE ON THE WHOLE
+3:	I AGREE VERY MUCH	-3:	I DISAGREE VERY MUCH

EXAMPLE:

+1 It is impossible for an honest person to become wealthy.

* * * * * * * * * * *END DIRECTIONS* * * * * * * * * * *

____ 1. The United States and Russia have just about nothing in common.

____ 2. The highest form of government is a democracy and the highest form of democracy is a government run by those who are most intelligent.

____ 3. Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups.

____ 4. It is only natural that a person would have a much better acquaintance with ideas he believes in than with ideas he opposes.

____ 5. Man on his own is a helpless and miserable creature.

____ 6. Fundamentally, the world we live in is a pretty lonesome place.

____ 7. Most people just don't give a "damn" for others.

____ 8. I'd like it if I could find someone who would tell me how to solve my personal problems.

____ 9. It is only natural for a person to be rather fearful of the future.

____10. There is so much to be done and so little time to do it in.

____11. Once I get wound up in a heated discussion I just can't stop.

____12. In a discussion I often find it necessary to repeat myself several times to make sure I am being understood.

____13. In a heated discussion I generally become so absorbed in what I am going to say that I forget to listen to what the others are saying.

____14. It is better to be a dead hero than to be a live coward.

____15. While I don't like to admit this even to myself, my secret ambition is to become a great man, like Einstein, or Beethoven, or Shakespeare.

____16. The main thing in life is for a person to want to do something important.

____17. If given the chance I would do something of great benefit to the world.

____18. In the history of mankind there have probably been just a handful of really great thinkers.

____19. There are a number of people I have come to hate because of the things they stand for.

____20. A man who does not believe in some great cause has not really lived.

____21. It is only when a person devotes himself to an ideal or cause that life becomes meaningful.

____22. Of all the different philosophies which exist in this world there is probably only one which is correct.

____23. A person who gets enthusiastic about too many causes is likely to be a pretty "wishy-washy" sort of person.

____24. To compromise with our political opponents is dangerous because it usually leads to the betrayal of our own side.

____25. When it comes to differences of opinion in religion we must be careful not to compromise with those who believe differently from the way we do.

____26. In times like these, a person must be pretty selfish if he considers primarily his own happiness.

____27. The worst crime a person could commit is to attack publicly the people who believe in the same thing he does.

____28. In times like these it is often necessary to be more on guard against ideas put out by people or groups in one's own camp than by those in the opposing camp.

____29. A group which tolerates too much differences of opinion among its own members cannot exist for long.

____30. There are two kinds of people in this world: those who are for the truth and those who are against the truth.

____31. My blood boils whenever a person stubbornly refuses to admit he's wrong.

____32. A person who thinks primarily of his own happiness is beneath contempt.

____33. Most of the ideas which get printed nowadays aren't worth the paper they are printed on.

____34. In this complicated world of ours the only way we can know what's going on is to rely on leaders or experts who can be trusted.

____35. It is often desirable to reserve judgment about what's going on until one has had a chance to hear the opinions of those one respects.

____36. In the long run the best way to live is to pick friends and associates whose tastes and beliefs are the same as one's own.

____37. The present is all too often full of unhappiness. It is only the future that counts.

____38. If a man is to accomplish his mission in life it is sometimes necessary to gamble "all or nothing at all."

____39. Unfortunately, a good many people with whom I have discussed important social and moral problems don't really understand what's going on.

____40. Most people just don't know what's good for them.

DPI

PART II

DIRECTIONS: Listed below is a series of discipline problems that may be encountered by public school teachers. Please consider <u>each</u> item (discipline problem) and indicate how frequently you encounter it in your industrial arts classroom and/or laboratory by circling the appropriate response to the right of each statement. Please note that there are four possible responses: N = NEVER, S = SELDOM, F = FREQUENTLY, A = ALWAYS.

EXAMPLE: Marking on desks N S (F) A

* * * * * * * * * * * *END DIRECTIONS* * * * * * * * * * *

		NEVER	SELDOM	FREQUENTLY	ALWAYS
1.	Stealing materials from school.	N	S	F	A
2.	Stealing tools, materials, or supplies from laboratory area.	N	S	E	A
3.	Possessing narcotics on school property.	N	S	F	A
4.	Smoking on school grounds.	N	S	F	A
5.	Stealing from another student.	N	S	F	A
6.	Throwing refuse on floor.	N	S	F	A
7.	Deliberately dropping books or other objects in class.	N	S	F	A
8.	Coming to class tardy.	N	S	F	A
9.	Refusing to participate in class activities or assignments.	N	S	F	A
10.	Failing to put away materials after use.	N	S	F	A
11.	Putting books or papers away too soon.	N	S	F	A
12.	Leaving room before dismissal.	N	S	F	A
13.	Failing to keep their seats in class.	N	S	F	A

		NEVER	SELDOM	FREQUENTLY	ALWAYS
14.	Failing to follow directions for assignment.	N	S	F	A
15.	Leaving laboratory or storage area messy.	N	S	F	A
16.	Wearing clothes too tight.	N	S	F	A
17.	Girls wearing skirts too short.	N	S	F	A
18.	Wearing inappropriate clothing to school (e.g., low cut dresses, lame jackets, etc.).	N	S	F	A
19.	Having arms around each other outside of class on school property.	N	S	F	A
20.	Making noise in the halls.	N	S	F	A
21.	Kissing outside of class on school property.	N	S	F	A
22.	Failing to be adequately clean.	N	S	F	A
23.	Throwing things at another student.	N	S	F	A
24.	Spitting	N	S	F	A
25.	Shoving or tripping another student.	N	S	F	A
26.	Pulling chair out from under other students.	N	S	F	A
27.	Hitting another student.	N	S	F	A
28.	Expelling gas in class.	N	S	F	A
29.	Excessive belching in class.	N	S	F	A
30.	Throwing tools, materials, or equipment about the laboratory.	N	S	F	A
31.	Reading or possessing obscene books or pornographic materials in class.	N	S	F	A
32.	Throwing water.	N	S	F	A
33.	Pulling pranks against another student.	N	S	F	A
34.	Drawing picture to poke fun at another student.	N	S	F	A

		NEVER	SELDOM	FREQUENTLY	ALWAYS
35.	Destroying or defacing another student's property.	N	S	F	A
36.	Throwing erasers, pencils, books, etc., in class.	N	S	F	A
37.	Calling another student names.	N	S	F	A
38.	Cheating on in-class assignment.	N	S	F	A
39.	Cheating on homework.	N	S	F	A
40.	Copying work from nearby students.	N	S	F	A
41.	Copying assignments from other students.	N	S	F	A
42.	Cheating on tests.	N	S	F	A
43.	Failing to complete homework.	N	S	F	A
44.	Plagiarizing (unauthorized copying).	N	S	F	A
45.	Consistently losing books, assignments, etc.	N	S	F	A
46.	Excessive complaining about feeling ill (hypochondriac).	N	S	F	A
47.	Consuming alcohol in classroom or laboratory area.	N	S	F	A
48.	Hitting the teacher.	N	S	F	A
49.	Possessing brass knuckles, molotov cocktails, etc., on school property.	N	S	F	A
50.	Lodging foreign objects in electric receptacles.	N	S	F	A
51.	Failing to leave building during fire drill.	N	S	F	A
52.	Starting fires in school.	N	S	F	A
53.	Whispering, or nonverbally communicating at inappropriate times.	N	S	F	A
54.	Possessing stolen goods (not stolen from school, teacher, or students).	N	S	F	A

		NEVER	SELDOM	FREQUENTLY	ALWAYS
55.	Possessing alcohol on school property.	N	S	F	A
56.	Making passes at teacher or getting fresh with teacher.	N	S	F	A
57.	Intentionally injuring one's self.	N	S	F	A
58.	Turning in false alarms or bomb scares.	N	S	F	A
59.	Making fun of mistakes of other students.	N	S	F	A
60.	Making fun of another student.	N	S	F	A
61.	Verbally interrupting a student while he is talking to teacher in class.	N	S	F	A
62.	Calling another student unacceptable names.	N	S	F	A
63.	Arguing with teacher.	N	S	F	A
64.	Destroying or defacing another student's property.	N	S	F	A
65.	Verbally interrupting when teacher is talking.	N	S	F	A
66.	Student dominating the class discussions.	N	S	F	A
67.	Pulling pranks against another student.	N	S	F	A
68.	Reading, writing, etc., while teacher is talking.	N	S	F	A
69.	Making allusions to sex (written or verbal).	N	S	F	A
70.	Clicking pens, or making other similar noises with small objects.	N	S	F	A
71.	Pointing out teacher's mistakes.	N	S	F	A
72.	Answering question in humorous, disruptive way.	N	S	F	A
73.	Lying to teacher with the intent to deceive (not fantasy).	N	S	F	A
74.	Deliberately trying to upset the teacher by misbehaving.	N	S	F	A

DD

PART III

DIRECTIONS: Please complete all the following items listed below. Write in your response for items 1, 2, and 3 in the blank to the right of each item. Please check only one response ☑ for items 4, 5, 6, and 7.

* * * * * * * * * * * *END DIRECTIONS* * * * * * * * * * *

1. Your age _____

2. Your years of teaching experience _____

3. The average number of students in your Industrial Arts classes _____

4. Type of school (check only one)

   ☐ - Rural

   ☐ - Urban

5. Type of Industrial Arts program (check only one)

   ☐ - Innovative . . . . . such as:
   - exploring technology
   - modern industry and technology
   - American Industry
   - world of communications
   - world of manufacturing
   - world of construction
   - world of transportation

   ☐ - Traditional . . . . such as:
   - general industrial arts
   - electricity/electronics
   - graphic arts
   - mechanical drawing
   - woodworking
   - metal working
   - photography

   ☐ - Both Traditional and Innovative

6. Type of lab (check only one)

   ☐ - General

   ☐ - General Unit

   ☐ - Unit

7. Grade level most often taught (check only one)

   ☐ - 7-8

   ☐ - 9-10

   ☐ - 11-12

APPENDIX E

ZERO ORDER CORRELATION MATRIX OF DEPENDENT AND INDEPENDENT VARIABLES

Zero Order Correlation Matrix of Dependent and Independent Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1. Non-Violent Criminal and Quasi-Criminal Misbehavior	1.00	.33	.34	.35	.41	.41	.33	.14	-.007	.02	.14	-.16*	.16*	.01	.08	-.10	-.07	.08	.004	-.31**	.25**	.08
2. Inconsiderate and Negligent Behavior		1.00	.27	.58	.51	.31	.61	.08	.02	.004	.02	-.08	-.08	-.06	.06	-.007	-.04	.09	-.05	-.07	.10	-.04
3. Improper Appearance			1.00	.34	.41	.35	.33	.22**	.04	.05	-.11	-.007	.007	-.13	.05	.06	-.14	.005	.15*	-.15*	.15*	.008
4. Horseplay				1.00	.41	.43	.62	.09	-.06	-.06	.04	.01	-.01	.04	-.12	.09	.07	.06	-.14	.15*	.07	-.26**
5. Cheating					1.00	.52	.55	.24**	-.06	.02	.05	.08	-.08	.04	-.07	.03	-.02	.05	-.13	-.10	.17*	-.09
6. Violent Criminal and Quasi-Criminal Misbehavior						1.00	.53	.15*	-.16*	-.06	-.02	-.09	.09	-.03	-.03	.06	-.03	.03	.0006	-.02	.07	-.05
7. Verbal and Symbolic Misbehavior							1.00	.10	-.12	-.15*	-.08	-.05	.05	.02	-.05	.04	.06	-.002	-.07	.08	.04	-.14
8. Level of Teacher Dogmatism								1.00	.03	.05	-.07	.08	-.08	.07	-.09	.03	.05	-.06	.01	.02	-.07	.06
9. Teacher Age									1.00	.79	-.03	-.28	.28	-.14	.21	-.10	-.17	.08	.12	-.17	.001	.19
10. Teaching Experience										1.00	-.03	-.22	.22	-.14	.06	.06	-.11	.15	-.03	-.18	.12	.08
11. Class Size											1.00	-.21	.21	.09	-.06	-.02	.06	.002	-.07	.07	-.03	-.05
12. Rural School												1.00	-1.0	-.03	-.16	.19	.19	-.06	-.16	.06	.07	-.14
13. Urban School													1.00	.03	.16	-.19	-.19	.06	.16	-.06	-.07	.14
14. Innovative Program														1.00	-.49	-.39	.21	-.05	-.19	.14	.09	-.27
15. Traditional Program															1.00	-.61	-.23	-.09	.36	-.26	-.09	.41
16. Both Programs																1.00	.05	.15	-.20	.14	.01	-.18
17. General Laboratory																	1.00	-.58	-.57	.19	.04	-.26
18. General Unit Laboratory																		1.00	-.34	-.01	.05	-.04
19. Unit Laboratory																			1.00	-.21	-.10	.35
20. 7-8 Grade Level																				1.00	-.62	-.46
21. 9-10 Grade Level																					1.00	-.41
22. 11-12 Grade Level																						1.00

*p < .05
**p < .01

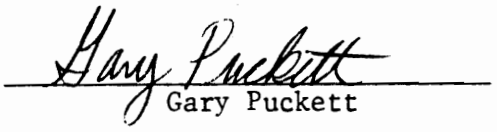
VITA

William Gary Puckett was born in Hart County, Kentucky, on March 19, 1948. He spent the first eighteen years of his life living and working on a farm in the same county. He graduated from Memorial High School in 1966 where he received twelve years of formal education. He was married to Peggy Sue Hines on September 3, 1967.

In the fall of 1966, Mr. Puckett enrolled at Western Kentucky University, Bowling Green, Kentucky, and majored in industrial arts education. As an undergraduate student, he worked as a student worker and was later foreman for laboratories in the industrial education and technology department at Western. After completing his undergraduate studies in 1971, he remained at Western to work toward the master's degree. During this period, he served as a graduate teaching assistant in the industrial education and technology department.

After completing his master's degree, Mr. Puckett was employed to teach industrial arts in the fall of 1972 at Warren East High School, Bowling Green, Kentucky. His teaching responsibilities were in the areas of metals and small engine maintenance and repair. In the summer of 1973, he moved to Blacksburg, Virginia, planning to pursue further graduate studies at Virginia Polytechnic Institute and State University. In the fall of 1973, he was employed to teach industrial arts at Cave Spring Junior High School, Roanoke, Virginia. His teaching responsibilities were in the areas of manufacturing and construction.

In the summer of 1974, Mr. Puckett was awarded an Educations Professions Development Act (EPDA) Fellowship which permitted him to enroll as a full time graduate student at Virginia Tech. He majored in vocational and technical education and minored in industrial engineering and operations research. The EPDA Fellowship expired after one year and he was employed as administrative assistant to the division director of Vocational and Technical Education, Virginia Polytechnic Institute and State University. Mr. Puckett received the Doctor of Education Degree in June of 1976.



Gary Puckett

INDUSTRIAL ARTS TEACHERS' PERSONAL CHARACTERISTICS RELATED TO THE FREQUENCY OF DISCIPLINE PROBLEMS

by

William Gary Puckett

(ABSTRACT)

The problem in this study was to determine what relationships exist among teacher perceived frequency of discipline problems occurring in secondary industrial arts classrooms or laboratories, level of teacher dogmatism, and selected demographic variables.

The research design was ex post facto. Both the dependent and independent variables were viewed retrospectively and neither were manipulated by the investigator. All information collected concerning each variable was achieved by means of a pencil and paper instrument. The population was 953 Virginia Industrial Arts Teachers. Of the 953 teachers, 211 were randomly selected for the sample.

Three instruments were employed to collect data for this study. The first instrument administered was the Dogmatism Scale (DS). Its purpose was to measure differences in openness and closedness of one's mind, or the level of dogmatism. The Frequency Assessment of Discipline Problems Instrument (DPI) was the second administered. This instrument was used to assess the frequency of discipline problems in each of seven selected discipline problem areas. The final instrument administered

was the Demographic Data Instrument (DD). The purpose of the DD was to collect data relative to the independent variables excluding level of teacher dogmatism.

A complete packet containing the three instruments discussed above was mailed to the sample of 211 industrial arts teachers. Two weeks after the mailing of the packet, a post card was mailed to teachers who had not responded. The purpose of the post card was to remind them of the initial request. Of the 211 teachers included in the sample, 176 responded. Three instruments returned were unusable; therefore, the data analysis was based on 173 responses, an 82 percent return.

Nine hypotheses were tested in this study. The first eight were tested to determine if relationships exist between the independent variables and seven discipline problem areas. Each hypothesis was designed to determine the relationship between one independent variable and each of the seven discipline problem areas. These first eight hypotheses were tested by computing the Pearson Product Moment Correlation Coefficient (r). The final hypothesis was designed to determine if multiple relationships exist among the independent variables and the seven discipline problem areas considered in this study. Multiple regression analysis was selected to test the final hypothesis in that it is capable of determining the multiple effects of more than one independent variable.

The level of teacher dogmatism was found to be independently related to three of the discipline problem areas: improper appearance,

cheating, and violent criminal and quasi-criminal misbehavior. It was also determined that the level of teacher dogmatism has multiple relationships with class size, type of laboratory, grade level taught, and type of school. It was concluded that urban schools appear to have more violent and non-violent discipline problems than rural schools. Younger teachers appear to perceive more violent criminal and quasi-criminal and verbal and symbolic discipline problems than older teachers. Grade level taught was found to be one of the strongest, independent variables associated with the frequency of discipline problems occurring in the classroom or laboratory. It appeared that more discipline problems are perceived at the 9-10 grade level and they seem to be of a subtle nature, the same type perceived by the dogmatic teacher.

The author recommended that the study be replicated in other areas such as math or English. Furthermore, the concept should be researched focusing especially on urban schools and the 9-10 grade level, the type of school and grade level where more discipline problems seem to exist. More research should also be done concerning the four discipline problem areas found to be related to the level of teacher dogmatism: non-violent criminal and quasi-criminal misbehavior, improper appearance, cheating, and violent criminal and quasi-criminal misbehavior. It was also recommended that further research be conducted on discipline problems including the level of student dogmatism as a variable. Finally, it was recommended that two other areas be researched: teacher placement and inservice education. This study indicated that more discipline problems are associated with the ninth

and tenth grade level. Therefore, since dogmatism is also associated with discipline problems, it might be well to place a dogmatic teacher above or below the ninth and tenth grade. A simulated method of inservice education was recommended to present techniques for teachers to employ when confronted with discipline problems. The teachers might play simulated roles and practice incorporating open minded techniques, in turn lowering their levels of dogmatism, and be confronted with fewer discipline problems as a result.