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THE IDENTIFICATION OF STUDENT DISRUPTIVE
BEHAVIOR IN INDUSTRIAL ARTS AND THE
APPLICATION OF SIMULATION TO THESE PROBLEMS.

THE OHIO STATE UNIVERSITY, PH.D., 1979
THE IDENTIFICATION OF STUDENT DISRUPTIVE BEHAVIOR
IN INDUSTRIAL ARTS AND THE APPLICATION
OF SIMULATION TO THESE PROBLEMS

DISSERTATION

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

By
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The Ohio State University
1979

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CHAPTER I

THE PROBLEM

Introduction

Student disruptive behavior is a major problem in the schools of our nation. From 1969 to 1978 Gallup Poll studies were conducted entitled "Public's Attitude Towards the Public Schools." It was concluded: "Only once in ten years since these surveys were initiated has discipline failed to receive more mention than any other problem" (Gallup, 1979, p. 34). Discipline ranked first with parents having children now attending public schools and discipline ranked first with citizens who have no children in public schools according to Gallup (1978).

Students, teachers, and administrators report that discipline is a significant problem. Clarke (1976) reported findings and concluded that: "Students, teachers, and principals believe that there is a discipline problem in the high schools of North Carolina. Less than 11 percent of the total study population thought that discipline was of minor or little concern" (p. 116). A review of literature, provided in Chapter II, indicates similar concerns about discipline in schools nationwide.
Discipline problems can occur in every subject area, even in subjects where students are motivated because of subject content or method. Puckett (1976) stated a common opinion about the subject area industrial arts:

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. (pp. 23-24)

There is substantial written evidence to support the position that discipline problems are significant events in every subject area. If student disruptive behavior problems are significant events and occur in various subject fields, what directions and activities can be provided to reduce or cope with these events? It has been advocated that there is a need to identify and record classroom events of educational significance. Teachers should be exposed to these events so they can learn to analyze and interpret the situations (Cruickshank, Kennedy, and Myers, 1973).

Support and concern for addressing discipline as a major educational problem is abundant. Roye (1971) stated that teachers must understand the many factors which form barriers to the learning process and to teacher-student interaction. Furman (1973) suggested that the pressures of subject area preparation, presentation, evaluation, and other activities are demanding and cause some teachers to resign from teaching. Student discipline problems are primary causes of teacher depression, defeat, and resignation.
Kindsvatter (1978) stated each teacher must develop or possess reasonable and defensible concepts of discipline. Baker (1969) reported classroom discipline problems and disciplinary tactics for various disruptive situations as the most unresearched area in the field of education.

Pupil-teacher relationship problems were reported in the Harrison (1955) study. Harrison stated the following conclusion concerning undergraduate industrial arts majors: "There is an apparent lack of understanding and technique to be used in obtaining and maintaining a desirable level of control in the classroom situation" (p. 142).

If disruptive behavior events are identified and analyzed, how can pre-service and in-service teachers experience and interpret these situations? Cruickshank (1971) suggested simulation as an instructional alternative in teacher preparation. Simulation of significant educational events can provide valuable experiences for teachers.

Support for simulation experiences was expressed by Taylor and Christensen (1967) in the following comment: "Experience in the space program provides convincing evidence of the value of simulation as a means of giving the student pre-employment experience through procedures less expensive or hazardous than the actual operation" (p. 19).

Support for and advantages of simulated misbehavior incidents as developed in a dissertation by Tshionyi (1976) include the following:
Simulation offers several advantages both to the designer of the instructional materials and to the prospective teacher. It represents only those elements of reality which the designer considers relevant to his purpose. The time factor can be manipulated either to expand or compress it to reach desired performance. Moreover, the elements of reality being represented can be augmented for a broader view of the problem or they can be reduced for concentration. (p. 4)

Simulation, as a method of presenting and experiencing unique, even traumatic, situations may be one of the most exciting potential developments the educational world has experienced in the last quarter of the twentieth century. Cruickshank (1971), Kersh (1965), and Twelker (1969) advocated the importance of simulation for teacher education.

Statement of the Problem

What student disruptive behavior problems are encountered by industrial arts teachers? Can several of the identified student disruptive behavior problems be simulated with instructional media technology and utilized in industrial arts teacher education? The specific dimensions of this study include: (1) identifying significantly bothersome and frequently encountered student disruptive behavior problems as perceived by industrial arts teachers in the State of Minnesota, (2) developing instructional prototype audio-visual materials by simulating selected disruptive behavior problems, (3) developing a teacher's guide for the instructional prototype, (4) designing and developing an instrument to assess the attitude of pre-service industrial arts teachers toward the instructional prototype material, and (5) field testing of the
The first part of this study involved collecting descriptive information about student disruptive behavior problems that are encountered by industrial arts teachers. Empirical base line descriptive information was not available. Student disruptive behavior problems could have been identified by applying the author's teaching experiences, as well as those of his colleagues, to identify these problems. This direction would have been unsound and questionable since a data base would not have been established. The decision was made to survey a larger group of secondary industrial arts teachers to form a data base which yielded support and validity to specific disruptive behavior problems.

The second part of this study involved selecting specific behavior problems and developing an instructional prototype from them. The instructional prototype presented decision-making experiences.

This researcher, as well as additional researchers, will benefit from this information. Professors who are teaching methods courses in industrial arts teacher education will be able to review, present, and evaluate the instructional prototype. Pre-service and in-service teachers of industrial arts can view and interact in sensitive, decision-making situations which involve the application of theory and practice as related to student disruptive behavior problems.
Research Questions

This study will attempt to answer the following questions:

1. What bothersome student disruptive behavior problems occur in Minnesota secondary school industrial arts classrooms and laboratories?

2. With what frequency do student disruptive behavior problems occur in the laboratory areas?

3. How will field-test participants respond to selected simulated incidents?

4. Will decisions and reactions of field-test participants be homogeneous in regard to their suggestions for the treatment of each simulated disruptive behavior incident?

5. How acceptable will the simulation materials be when they are assessed by undergraduate industrial arts majors who are participating in the field testing of the materials?

The data collected by this study are not intended to measure achievement of psychological and pedagogical principles. Rather, this study is designed to test the acceptability and usefulness of a product in teacher education.

Assumptions

The following assumptions were germane to this study:

1. Student disruptive behavior problems are present, to some extent, in all industrial arts classrooms and laboratories.

2. Information collected by the Student Disruptive Behavior Check List (SDBCL) will provide a data base for developing the instructional prototype.

3. Minnesota secondary industrial arts in-service teachers will be able to recall and identify frequent and bothersome student disruptive behavior problems and these problems would not vary significantly from those to be found in other states.
4. Simulation of disruptive behavior problems through classroom television is an effective means of presenting decision-making experiences to pre-service industrial arts teachers.

5. Field-test participants had some previous instruction in effective discipline practices or laboratory control.

**Delimitations and Limitations**

The following factors constrain generalizability from this study:

1. The study was delimited to Minnesota industrial arts teachers who taught during the 1974-1975 school year.
2. Due to cost factors, only five selected frequent and bothersome disruptive behavior problems were simulated and field tested at three Midwestern universities during the winter and spring quarters of the 1977-1978 academic year.
3. There were no "correct" or absolute responses imposed or suggested for the solution of disruptive behavior incidents, since cause and effect are highly situational.
4. This instructional product should be viewed as a prototype product, not as a finished product. Therefore, teacher educators and other potential users must make appropriate modifications to meet their specific needs and conditions.

**Definition of Terms**

Terms and definitions relevant to this study were:

**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 schools function" (Good, 1973, p. 186).

incident: an occurrence that interrupts the flow of laboratory and classroom activities, and which requires the attention of the teacher.

secondary education: public school students enrolled in grades seven through twelve.

simulation: "to simulate is to give the appearance and/or effect of something else" (Webster, 1969, p. 2122).

student disruptive behavior: any student action or behavior which interferes with the learning process and is unrelated to the controlled learning environment.

Chapter Summary

There is substantial evidence to conclude that student disruptive behavior is a serious problem in the schools of America. Disruptive behavior problems are significant educational classroom and laboratory events. An examination of research in education substantiates that classroom and laboratory discipline problems and decision-making tactics remain largely unresearched.

Several experts suggest that research studies in classroom control have been limited in number because instructional alternatives have not been identified or available. One instructional alternative is simulation. Simulation permits the manipulation of time and significant classroom or laboratory events. The development
of a data base relating to secondary disruptive behavior problems in industrial arts and the application of selected discipline problems to simulated incidents appear to be promising instructional alternatives for industrial arts teacher education.
CHAPTER II

REVIEW OF LITERATURE

Introduction

Youth are confronted with dynamic changes in the various institutions of American society. Some of these changes include the insecurity of the world political institutions. The changing values of the family result in conflict and frustration for parents and children. Educational institutions must face the knowledge revolution and prepare youth for life in the twenty-first century. The ever changing economic system is triggered by advanced industrial technology and diminishing world resources. This results in increased uncertainty for youth. Massey (1978) discussed the cultural shock American youth are facing. He noted:

... youth alienation is symptomatic of a malaise affecting the whole of American society. Contemporary youth are growing up in a period when Americans face drastic cultural change for which our communal experience has left us unprepared. We are living in the age of future shock, witnessing the decline of family stability, increased mobility, greater affluence, and the disintegration of established codes of conduct and value systems. (p. 320)

As adolescents advance into the adult world they appear to encounter increased conflicts and frustrations. Adolescents who have difficulty coping with problems sometimes vent their frustrations
in school activities by displaying disruptive behavior.

The conflict and frustration that various youth face sometimes result in a resentment of authority and also an indifference to those who are in authority. Divoky (1979) suggested that elementary and secondary school youth do not trust authority. Decisions are questioned. Adult decisions which concern America's involvement in "just wars" and the Watergate incident have created serious indifference in youth and uncertainty in the institutions of American society. Divoky stated: "In the scramble to establish the authority of the schools, we now have movements for accountability, minimum proficiency standards, the teaching of fundamentals, and the return to basics" (p. 578).

The educational institution in the United States, known as public education, is unique when compared to other countries of the world. For example, twelve years of public education is guaranteed to all students. This results in a situation in which all options, with the exception of school, are closed to students between the ages of five and eighteen years of age. Public education in the United States, especially secondary education, is truly a national experiment faced with many difficulties including school budgets, violence, disruptive behavior in the schools, integration issues, and many other problems.

Teachers, teacher educators, students, parents, and others must strive to improve the educational institution of American society. This review of literature has focused upon: (1) research
related to disruptive behavior, (2) other literature related to disruptive behavior, and (3) research and other literature related to instructional simulation. Classrooms and laboratories of many secondary schools are not conducive to learning because student disruptive behavior is occurring. The study of student disruptive behavior in industrial arts laboratories has been proposed in Chapter I as a significant study to assist in improving this learning environment. Classroom simulations used in teacher education may better prepare prospective teachers for the tasks ahead of them.

Research Related to Disruptive Behavior

Discipline problems are prevalent in the public schools as reported in the Gallup Opinion Index (1978). Educational leaders also claim that this is one of the most unresearched areas in the field of education. This encouraged the researcher to examine the research in this area. This section of Chapter II will report research related to disruptive behavior problems in industrial arts.

A survey by Harrison (1955) assessed the primary professional difficulties of beginning industrial arts teachers. The specific intent was:

... to explore some relationships which might exist between (a) scholastic achievement as an undergraduate student and the problems to which he expresses a sensitivity; (b) problems reported by beginning industrial arts teachers functioning in a unit type shop and those who teach in a general type shop; (c) problems reported by beginning industrial arts teachers who are afforded supervision from different sources; (d) problems reported by beginning industrial arts
teachers at the junior high school level, the senior high school level, and a combination thereof; and (e) problems reported by teachers with one year of, or no previous teaching experience. (p. 72)

Maintaining an orderly class was consistently listed by respondents as a necessary part of classroom control. Beginning industrial arts teachers at the junior high and the senior high school level checked handling discipline problems as a frequent response. Beginning industrial arts teachers suggested that additional observing and assisting experiences with secondary youth should be a requirement for education majors. Participants from the twenty selected universities who participated in this survey responded concerning the amount of direct experience pre-service teachers received in their undergraduate programs. Harrison states: "Direct experience with children and youth were (sic) allotted approximately 7.5 per cent of the undergraduate requirements" (p. 136).

Svendsen (1970) studied effective personnel control practices employed by industrial arts teachers in selected metropolitan areas of Colorado. He solicited teacher reaction to current pupil control practices through a questionnaire. Svendson concluded that more emphasis should be placed upon teacher-pupil relationships in both pre-service and in-service education.

Puckett (1976) conducted a study to determine the frequency of discipline problems in industrial arts. He selected his sample from industrial arts teachers in Virginia. Puckett's ex post facto study assessed various levels of teacher dogmatism. The
relationships of class size, teacher's age, experience, grade level, urban or rural location of the school, and other variables to discipline problems were assessed. He concluded that improper appearance, cheating, and criminal related misbehavior were found to be inter-related to the level of teacher dogmatism. Puckett noted: "... 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" (p. 85). Inexperienced industrial arts teachers had more discipline problems than experienced industrial arts teachers. More discipline problems were associated with ninth and tenth grade levels in industrial arts than other grade levels. Urban school industrial arts teachers experienced more violent and non-violent discipline problems than did industrial arts teachers in rural areas. Puckett recommended the development of simulated discipline experiences for teachers. However, no instructional materials were developed in his study to assist teachers in resolving discipline problems in laboratory or classroom situations. The review of related literature supports the conclusion that a dearth of information exists in this area of research and development. This is notably evident in industrial arts education.

Other Literature Related to Disruptive Behavior

Student disruptive behavior problems have been with us for many decades. These problems have required various controls or discipline measures. In 1871, Orcutt noted: "Indeed, lack of discipline is a
radical, ruinous defect in any school, and in a large majority of the public schools in every community" (p. 11).

Teachers are still faced with these problems. Various ideas are suggested which can be studied, assessed, and applied to reduce student disruptive behavior. This section describes selected ideas, paradigms, and investigations related to disruptive behavior. For example, a teacher achieves classroom control by preventing trouble or correcting it immediately after it has occurred. The wise teacher uses preventive measures so there is little need for correction. Usually misconduct is a result, not a cause (Brown and Phelps, 1961).

To maintain control in the classroom and laboratory requires planning, organizing, controlling, and evaluating activities (Wiener, 1972). Student disruptive behavior problems seemed to occur more frequently with various types of adolescents. The adolescent may be aggressive, dishonest, consistently disobedient, emotionally upset, extremely extrovert, lazy, nervous, and social maladjusted (Stoops, Johnson, and Smith, 1961).

Koff (1967) developed a theoretical paradigm to analyze the dynamics of task and process elements of the group life of a classroom. Two types of conflict-producing demands which he identified were intra-personal demands and external demands. This study and a second study were completed at the Stanford Center for Research and Development in Teaching.

A second study by Koff and Warren (1968) suggested that students learn to seek pleasurable learning situations and avoid painful
situations. When a teacher's behavior was inconsistent it resulted in the student being unable to predetermine pleasurable or painful situations and a condition of uncertainty resulted. This inconsistent teacher behavior turned a significant percentage of students away from the process of schooling which resulted in disruptive student behavior.

Peck and Miller (1971) studied "depolarization of antagonistic groups." This investigation focused upon resolving conflicts between teachers and students in one urban school. The treatment involved the use of tape recorders to achieve understanding and effective communication between antagonistic groups.

Significantly bothersome and frequently perceived problems of secondary school teachers and students were studied by Cruickshank, Kennedy, and Myers (1973). This study was designed to: (1) define, identify, and verify educationally significant events, (2) analyze the events, (3) capture and record events, and (4) suggest a way to identify and employ theoretical knowledge. Two separate samples were involved in this study. The first sample was utilized to obtain day-to-day problems common to junior high and senior high school teachers. The total sample was drawn from a membership list of the National Association of Secondary School Principals. A total of 30,000 secondary schools formed this target population. From this frame, 81 schools were randomly selected and a letter sent to each school principal. A total of 26 school principals indicated their faculties would participate. A 10% random sample
of teachers from the 26 schools was selected by the researcher. They were provided with "My Biggest Problem Today Inventory." A total of 563 usable inventories was returned. These inventories served as the basis for the construction of a second inventory which was described as the 'Teachers' Problems Checklist' (TPCL).

The second sample utilized the TPCL which requested that teachers indicate whether a problem was bothersome and whether it was frequent. Bothersome problems were placed into one of six clusters and the frequent problems were placed into one of four clusters. "Control" was identified as one cluster focusing on discipline. The findings indicated this cluster received sufficient teacher responses to list it as a significantly bothersome cluster.

Desired principles of behavioral science must be taught. If appropriate classroom and laboratory student control methods are not included in the teacher trainee's program, teachers will revert to disciplining practices they have experienced or observed. More than direct observation of teaching is needed. Tucker (1973) stated that direct observation of students for several hours each week for one semester did not result in teacher behavioral changes.

Stockley and Perlmutter (1971) suggested that teachers and students play games. Teachers seemed to expect problems and come to class equipped with "threat" cards. Students come to class with "mischief" and "defiance" cards. These are clever theoretical constructs; however, what is needed is: (1) identification of the threats and mischief problems and (2) development of instructional
materials which can be useful in pre-service and in-service education of teachers.

Mallory (1979) suggested that even experienced teachers today sometimes watch their classes disintegrate in the face of child-induced chaos. This disintegration requires more than a good lesson plan to reduce student disruptive behavior. Mallory developed an approach he termed the "LEAST Approach" to discipline. Letter by letter the "LEAST Approach" involved the following: (1) "L" - Leave it alone. A teacher should not attempt to solve all disruptive behavior. (2) "E" - End the action. Stop the disruptive action with voice and with the eyes. (3) "A" - Attend more fully. Background information must be developed by asking questions—who, what, when, where, why, and how. Allow emotions to settle by telling students that you will talk later. (4) "S" - Spell out directions to the students. Directions must be clear and within the student's capabilities. (5) "T" - Track the student's progress. Keep private records including what happened, when it happened, who was involved, and what action was taken.

Dodge (1975) cites that historically discipline was associated with demand and punishment. Presently, discipline is viewed as control rather than punishment. Control is achieved by teachers who are fair when working with disruptive students. Johnson (1978) agreed with Dodge when he suggested: "punishment concentrates on the past failures of the patient. Discipline provides a guideline for behavior in the present and the future" (p. 340).
A series of readings written by teachers and university educators titled *Discipline in the Classroom* (1974) included a section on disciplinary policies. Three disciplinary principles suggested were:

1. Disciplinary policies should stress the responsibilities as well as the rights of the individual.

2. Disciplinary policies should be positive and directed toward the goal of self-discipline. The emphasis should be on the benefits of good self-discipline both to the group and to the individual.

3. Disciplinary policies should be primarily preventive, secondarily corrective, and never retributive. (p. 32)

Glasser (1969) emphasized the importance of reasonable rules and enforcement of jointly-developed student-teacher rules. Reasonable rules assisted students in becoming responsible enough to take advantage of the educational experiences made available to them. Without rules youth assumed that any type of behavior was acceptable and the only thing that was important was to be "happy" and "well-adjusted." Glasser concluded: "Rules should be reasonable; they should be changed when conditions change; they should, when possible, be decided upon jointly by faculty and students; and they should be enforced" (p. 203).

Grambs, Carr, and Fitch (1970) suggested that a teacher has two major tasks in dealing with classroom behavior. This first task involves the development of tact, understanding, and diplomacy in handling normal student disruptive behavior situations. Second, he or she needs insight into abnormal misbehavior.
The importance of maintaining order in the classroom and laboratories of our nation's schools was supported by Wesley (1971). He questioned the source and effectiveness of classroom control instruction in teacher education with the following words:

... the ability to maintain order is one of the greatest challenges faced by new teachers. Nothing has more to do with their future success and happiness. Since the importance of the subject has long been recognized, one may assume that considerable attention is paid to it in the training of teachers. This assumption should raise two significant questions. First, from what source does the prospective teacher learn about discipline, and secondly, how effective is the instruction that takes place? (p. 346)

Wesley answered his first question by suggesting six sources of information for the prospective teacher to consider when learning about discipline;

1. The prospective teacher can learn about discipline from the university instructor and also from reading about the subject in educational methods classes.
2. The college supervisor of student teaching is a possible source.
3. The supervising teacher is a third source of information.
4. Other teachers, the principal, and department chairperson can provide information about discipline techniques.
5. A fifth source of information is other student teachers.
6. Experience is the final source suggested.

Wesley's second question concerned the effectiveness of the instruction that takes place. He feels specific shortcomings hinder effective classroom discipline. These hindrances include:
1. Educational methods courses with information about classroom control are frequently taken prior to the senior year. The future teacher may forget much of what was learned unless he or she is able to apply the information soon.

2. The topic may not be taken seriously because the student teaching experience is assumed to be far in the future.

3. Classroom control as a topic in a methods class cannot be treated in the same manner as other topics. A discussion may not be an effective means of instruction in this situation.

4. The amount of time allowed in methods classes for classroom control may not be sufficient.

5. There is a lack of adequate resource material. Too often textbooks contain only one chapter on classroom discipline.

A supportive voice for additional pre-service and in-service education focusing on disruptive behavior problems was expressed by Hyman (1978) in the following comment:

Surveys have consistently revealed that the vast majority of teachers—even those who would retain corporal punishment—want to develop a large repertoire of ways to maintain order and promote learning without the use of force. In fact, teachers consistently complain about the lack of appropriate pre-service and in-service training in this area. (p. 30)

An increasing amount of research concerning classroom management and teacher behavior has been developed by individuals in a special study center. Irwin Hyman, Director of the National Center for the Study of Corporal Punishment and Alternatives in the Schools, reported:
authoritarian teachers tend to be less secure, more in need of rigid structure, more likely to feel moral guilt, and more fearful of less control. As a result, they tend to make more errors in classroom management and generate more anxiety and hostility among children. Democratic teachers tend to be more secure and flexible personally, more tolerant of change, and more liked by children; most important, their students gain internalized controls. (p. 32)

Kindsvatter (1978) felt that the causes of student disruptive behavior lie within a complex pattern of social relationships and cannot be managed through the application of predetermined techniques. He discussed three components in his conceptualization of discipline. These components are termed behavioral expectations, behavioral adjustments, and control techniques.

1. Behavior expectations: the teacher and the students need to decide appropriate behavior.

2. Behavior adjustments: for optimum learning, the teacher must decide which adjustments are necessary in a student's behavior.

3. Control techniques: control techniques include expert power, referent power, legitimate power, reward power, and coercive power.

Kindsvatter (1978) stated: "The research findings indicate that supervisors who manage primarily with expert and referent power are most successful as group leaders" (p. 324). He also stated: "... the most effective control technique for serious misbehavior is the private teacher/student conference" (p. 324).

Teacher education institutions, through specific course offerings, have the responsibility for educating future teachers
regarding appropriate or permissible disciplinary action. Permissible
disciplinary action in some public school classrooms and laboratories
has been to reduce a student's grades for disruptive behavior. At
least two court cases have ruled against this practice. In the 1965
Wermuth Case and the 1975 Dorsey Case the courts ruled against
lowering grades for disciplinary purposes (Connors, 1979).

The literature in school law has produced useful material
related to: (1) interpretation of "substantive" due process of a
student, (2) rules for suspensions and expulsions, (3) rules on
searches and seizures, (4) dress and hair style codes, and (5) open
file rules.

School law defines limits and describes many aspects of a
teacher's decision-making activity related to student disruptive
behavior. The importance of the need for future pre-service and
in-service teachers to study school law and student disruptive
behavior problems can be justified from the increased litigation
activity affecting schools and teachers. The Fourteenth Amendment
which involves due process of law includes the rights of juveniles.
McDaniel (1979) concluded: "A rule that is patently or demonstrably
unfair or a punishment that is excessive may be found by a court to
violate the 'substantive' due process of a student..." (p. 704).
The gravity of the offense and the severity of the punishment enter
into due process rights. Written notice of the offense and the
opportunity for the student to present his views of the disruptive
behavior are becoming common practice.
McDaniels also reported: "When a student is expelled from school, he should be given a statement of specific charges and the grounds for expulsion, a formal hearing, names of witnesses against him, and a report of the facts to which each witness testifies . . . " (p. 70l). Suspensions and expulsions are two ways educators have found for controlling students. Suspensions are a temporary separation of the student from the school. Expulsions are more severe because such action results in permanent separation from the educational institution.

Four types of suspensions are: short-term, long-term, indefinite, and extra-curricular activity suspensions. Connors (1979) stated: "A short-term suspension is an involuntary absence on the part of the pupil from either school or the educational process for a period of 10 days or less" (p. 14). A condition of short-term suspension, as determined by the United States Supreme Court, is the student's right to be given oral or written notice of the charges. No formal hearing or legal counsel and witnesses are necessary. Long-term suspensions and expulsions require a more formal hearing. "... neither principals nor teachers can expel students. The courts have generally held this action to be a school board prerogative" (Connors, 1979, p. 20).

Connors pointed out that searches and seizures of stolen school property, weapons, knives, guns, or any contraband from disruptive students are permissible because of the principle of "in loco parentis." The term "in loco parentis" means in the place of the
parents. The searching of disruptive student's locker by school authorities to locate contraband is legal. Connors stated: "... the use of a school locker is a privilege, not a right, and that while the locker cannot be opened by other students, it may be opened by school authorities" (p. 25). There is strong evidence "... federal courts do not want to interfere with educators disciplining students when the educational process is in danger of being disrupted" (p. 38).

When student disruptive behavior is thought to be promoted by inappropriate dress and hair style, certain cautions should be observed before taking any action. Connors (1979) reports that the Eleventh United States Circuit Court of Appeals has "... been inconsistent in dealing with the problem with student dress and hair style codes" (p. 47). Health and safety reasons have been upheld by the courts as valid reasons for regulating student apparel. Connors stated: "... shop, art, physical education, and home economics are all classes in which dress and hair style codes may be implemented for safety reasons" (p. 47).

Industrial arts teachers are liable for any comments they write about a disruptive behavior problem if they place these comments in a student's file. Only objective measurable observations should be written and placed in a student's school record. It is legal for a student to view his school records with a written consent of the student's parents. The Buckley Amendment permitted inspection of school records. However, "... files that have been completed or
closed prior to January 1, 1975 are not open to student inspection" (Connors, p. 54).

Control of disruptive behavior problems in the industrial arts laboratory can be a serious problem. Ambrose (1973) suggested that maintaining discipline is a cooperative endeavor between two persons or any group of persons. He felt that there are nine main principles in establishing discipline. These principles are: (1) confer with parents, (2) avoid punishing the entire group, (3) never punish the student when the teacher or the student are experiencing high emotional stress, (4) avoid making threats, (5) avoid punishing a pupil in the presence of other pupils, (6) never lower the pupil's grade as a punishment, (7) avoid corporal punishment, (8) investigate the underlying causes of the problems, and (9) send the student to the principal only in serious cases.

Joss (1959) believed some of the most difficult student disruptive behavior problems occur: "... from the custom of 'dumping' the incorruptible imbeciles, and the 'hopeless' ..." (p. 8) secondary students into industrial arts classes. He also alluded to the unique differences between laboratory and classroom environments including movement and freedom, safety factors, machine noise, and the need for potential in each student to develop psycho-motor as well as cognitive and affective learning.

Laboratory activities require extensive planning, not only to reduce possible student disruptive behavior, but to assure safety and effective learning. Fucett (1976) concurred: "One major
cause of disruptive problems is disorganization" (p. 24). The classroom and laboratory atmosphere in schools today must be open and democratic to reduce the frequency of discipline problems. Students should be involved, to some degree, in making a set of rules for self-control, character, orderliness, and efficiency. Careful planning and organization of learning activities by the industrial arts teacher are important factors in reducing and preventing discipline problems.

The historical practice of corporal punishment in the United States as contrasted to several European countries was reported by Boonin (1979). "Corporal punishment has been banned in Poland since 1783, in the Netherlands since 1850, in France since 1887, in Finland since 1890, and in Sweden since 1958. It is also prohibited in the Soviet Union and almost all the other Communist block countries" (p. 395). He conducted a survey on the use of corporal punishment in the public schools. He sent questionnaires to all fifty state commissioners or superintendents of education in the U.S.A. and reported the following: "According to the survey, 40 states authorize school corporal punishment by law (but 37 do not even define it). A total of 44 chief state school officers admit that corporal punishment is administered within their state boundaries" (p. 395).

Corporal punishment was usually used only with children in grades K-8 as reported by Boonin (1979). His survey also indicated that the principal or the teacher, with a witness, administered
corporal punishment. Educators who answered his questionnaire emphasized the need for other more effective means of discipline.

Individuals who favor corporal punishment usually do not favor this practice for all types of infractions, but rather as a practice for pupil control when all other practices have failed. Brenton (1978) listed the following four reasons for the use of corporal punishment:

1. Corporal punishment acts as a deterrent to would-be offenders.

2. Teachers and administrators have to spank because parents have been negligent in disciplining children.

3. Teachers and administrators report that some parents encourage the spanking for serious misbehavior.

4. Corporal punishment is more effective than suspending a child from public education.

Those opposing corporal punishment cite the conclusions of a National Education Association Task Force Study. The conclusions of this task force study were: physical punishment had to be repeated to be effective, it increased disruptive behavior, and it increased aggressiveness. Research studies concluded that: "Students who are most often targets for corporal punishment are those with very low self-esteem" (Brenton, 1978, p. 54).

The issue of corporal punishment to establish discipline has resulted in several Supreme Court cases. As a result of the 1977 U.S. Supreme Court ruling Ingraham vs. Wright, Connors (1979)
suggested the following:

1. Corporal punishment, generally should not be used in a first offense situation.
2. The students should be aware of what misbehaviors could lead to corporal punishment.
3. Another adult witness should be present during the administration of corporal punishment.
4. The student should be told (in front of the adult witness) the reason for punishment.
5. Upon request, the disciplinarian should inform the student's parents of the reasons for such punishment (p. 10).

Connors stated: "The use of corporal punishment is a high liability practice" (p. 13). If a decision to use corporal punishment is made the following guidelines are suggested:

1. The educator should not use more than three whacks with a paddle.
2. The punishment should never leave a bruise or mark on the student.
3. The punishment should only be applied to the buttocks.
4. The punishment must not cause a temporary physical injury.
5. The punishment must not cause a permanent injury.

Johnson and Morasky (1977) reported that behavior modification was one technique designed to prevent or reduce student disruptive behavior. Galloway (1976) listed four general steps in the strategies of behavior modification: (1) observe, talk with, and listen to determine what behavior needs to be modified; (2) with the learners, decide upon appropriate objectives for change; (3) isolate and record the frequency of the problem and the stimuli which cause the misbehavior; and (4) "fade out" past reinforcements and
punishments to permit natural reinforcers of success to maintain modified behaviors. Galloway explained that one commonly used strategy of behavior modification is the token system. Tokens may be chips, coins, check marks, and other rewards. The tokens are redeemable later for reinforcers such as free time, food, and other rewards. A token system for modifying behaviors includes: (1) a description of appropriate behaviors, (2) tokens for positive reinforcement, (3) ignoring of inappropriate responses or withdrawing tokens, and (4) redeeming of tokens.

The reward strategy of behavior modification may appear to be a questionable, mechanical system. However, research suggested that there are favorable results with behavior modification. Hamachek (1975) discussed one study:

... the introduction of behavior modification techniques resulted in increased study rates along with the concomitant reduction in classroom misbehavior. A temporary reversal during which the rewards are discontinued resulted in a return to the original symptoms. However, a return to the rewards schedule increased study rates and decreased disruptive behavior. Similar reports have been reported in other studies. (p. 715)

Glasser (1977) described reality therapy as an approach for discipline problems. He explained that reality therapy involves eight concepts to which a school staff must commit itself as discipline problems are resolved. These concepts are: (1) be personal, (2) refer to present behavior, (3) stress value judgments, (4) plan, (5) be committed, (6) don't accept excuses, (7) do not punish, and (8) never give up.
The educational journals contained numerous articles about discipline. Thomas (1977) stated: "At Board of Education meetings across the nation, discipline is a main item of discussion. It appears that discipline has become the top item of concern for parents, teachers, administrators, and just about everyone else" (p. 309).

The review of literature affirms the importance of understanding prevailing codes, statutes, and guidelines of school law. Corporal punishment is authorized in a majority of states in the United States of America. A wide range of literature advocates the need to develop alternatives to corporal punishment. Two alternatives to reduce student disruptive behavior include: (1) behavior modification and (2) reality therapy. These techniques have attained recognition and application in research and development efforts.

Discipline problems in industrial arts laboratories suggested the need for research and development in this specific subject area.

Research and Literature Related to Instructional Simulations

The review of the research and literature on instructional simulations supported the importance and need for instructional simulation in education. Simulation of student disruptive behavior in industrial arts laboratories has not been studied. This assertion was based on a review of research including Summaries of Studies in Industrial Arts, Trade and Industrial, and Technical
A supporting voice for simulated instruction of disruptive behavior was expressed by Puckett (1976) in the following comment:

... teachers might participate in workshops or seminars designed to present techniques for teachers to use when confronted with discipline problems! The teachers 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. (p. 89)

Kersh was one of the pioneers in classroom simulation experiences for student teachers. Twelker (1966) assisted Kersh and other researchers in experimenting with simulation techniques. He reported the experiment as follows: ". . . sound motion pictures, multiple projection techniques and printed materials are employed to simulate a single sixth grade class in a variety of problematic situations in a laboratory facility" (p. 1).

Twelker (1966) explained that the N.D.E.A. Title VII sponsored study was designed to investigate the effects of two types of prompts on the learning and transfer of student teachers. An experimental design using a pretest and posttest was selected to study the two types of prompts. Pre and posttests consisted of film sequences that required identification of the classroom problem as well as action responses to each problem. The findings indicated that the experimental treatment groups produced gains in posttest performance.

The purpose of Tshionyi's (1976) pilot study was to develop an instructional program to introduce prospective teachers to
pre-classroom experiences in simulated disruptive behaviors. The instruction was given to eleven student teachers. The objectives of the study focused on identifying conditions which provoked misbehaviors and the ability to decide on a course of action for reducing the simulated misbehavior. The findings revealed that seven of the eleven student teachers made gains between the pretest and the posttest scores in selective cognitive knowledge areas.

Heyman (1975) stated that the first simulation games were war games. These were followed by simulated business and diplomacy games in the 1950's and social studies games in the 1960's. He defined simulation as follows:

A simulation is an imitation or simplification of some aspect of reality. A more elaborate definition is: A simulation is an activity whose rules tend to generate in the total behavior of the participant a model of some real world process. Toy trains with human engineers are simulations, as are pilot and astronaut training devices, often called "flight simulators." (p. 11)

In discussing the criticism of simulations, especially simulation games, Heyman (1975) stated: "It is my observation that simulations help people to see themselves better; I'm not sure that this will change values or attitudes. Certainly simulations will cause most participants to examine their values" (p. 30). In support of simulation and gaming concepts in a technological world, Abt (1970) stated: "As civilization evolves toward highly technological societies, the ability to use abstractions becomes more and more necessary for people to function effectively" (p. 4).

Simulation, especially instructional simulation, is an
encouraging area for educational research. Kachaturoff (1978) interjected: "... it might be preferrable for learners to experience feelings of failure, rejection, poverty, excessive pressure, futility, hopelessness, and helplessness in a controlled simulation situation rather than in the real situation" (p. 222).

Utilizing simulation, learners may make poor decisions, unwise decisions, or decisions which are neutral. However, they do not have to suffer the penalties. Another advantage of simulation concerns the individualized instructional possibilities. Simulations also encourage the learner to synthesize facts, principles, and values from previous teacher education courses (Cruickshank, 1971).

Kachaturoff (1978) emphasized that it is unnecessary to include every facet of the real environment in a specific simulation. Those facets that bring about the desired objectives should be highlighted in a simulation experience. A debriefing and discussion experience is valuable after participating in the simulation incident. Kachaturoff suggested some of these questions which should be asked of the participants in a simulated instructional program. "What happened during the experience? Why did it happen? What kinds of decisions were made? What if other decisions were made? How did this experience really reflect reality? Do they see any similarities with the real life situation" (p. 22h)?

Simulation can be used in conjunction with college-based teacher education programs. Cruickshank (1971) cited several
advantages of utilizing simulation with student teaching. They were:

1. Guarantee beginning teachers an exposure to severe and frequent problems which may not occur during student teaching.
2. Afford opportunities to solve difficult problems rather than watch or copy the way someone else does it.
3. Increase supervising teacher and student teacher interpersonal awareness, lessening the barriers to two-way communication.
4. Improve placement of student teachers, reducing the number of poor assignments.
5. Increase the capability for diagnosing student teacher needs and provide more individualized and personalized experiences in the host school and community.
6. Offer common ground that may enhance interpersonal relations among student teachers.
7. Provide the setting to gain knowledge of school staff resources among student teachers.
8. Give student teachers an opportunity to apply what they have learned in the college classroom to simulated situations which should tend to relate theory to practice. (pp. 17-18)

It has been advocated that simulation offers interaction among student, teacher, and the discipline problem in a way that would otherwise be impossible. Armstrong and Taylor (1971) discussed decision-making:

We can think the same thought, but we cannot both make exactly the same decision. If we accept that each man is morally autonomous he cannot share the responsibility for his action. But he can share his thoughts. As professional educators we must find methods to communicate the incommunicable. (p. 46)

An inherent part of simulation is sharing of thoughts and ideas. This is an important advantage of simulation, especially if we can communicate positive practices. Twelker (1969) felt simulation was important and had advantages over conventional methods.

He stated:
Simulation provides an interest sustaining mode that is particularly useful for exercising behavior, particularly under a variety of contexts. Simulation is a more powerful means of placing a learner into a 'desired set' or 'perceptual frame' to sensitize and direct him. (p. 68)

Silvius and Bohn (1976) offered support for simulation as an "... instructional method that needs to be carefully considered and evaluated by those planning and organizing ..." (p. 290).

Educators who are responsible for planning and organizing college-based teacher education programs should consider the potential of simulation.

Elizabeth Maccia stated the importance of success in the training of future teachers:

As a result of experience a teacher has developed ideas about education that are successful in practice. However, unless such ideas are made explicit and so available for transmission within the teacher education process, the future teacher only will turn successful as his ideas about education become adequate. (Maccia, 1963, p. iii)

Researchers and educational leaders have emphasized the concern and seriousness of student disruptive behavior in schools of our nation. Undesirable student behaviors, as well as teacher behaviors, result in serious barriers to the learning process. Research and development in teacher education can assist in alleviating teacher-pupil conflict. Gay (1976) states: "A relatively recent development in educational research is the advent and growth of R & D programs. ... The major purpose of R & D efforts ... is to develop effective products for use in schools" (p. 7).

The review of literature supports the usefulness of instruc- tional simulation as an alternative in teacher preparation. An
important teacher education council supports institutional simulation. Cruickshank (1971) reports: "Simulations provide an alternative and have been cited by the National Council for Accreditation of Teacher Education (NCATE) as an acceptable form of laboratory experience" (p. 21).

Chapter Summary

Educators, parents, and students consistently communicate the fact that student disruptive behavior is a major problem in public schools in the United States. Major public opinion poll results have indicated that discipline ranks at or near the top of each survey. Generic reasons for increased discipline problems with school youth are many. Educational leaders suggest that youth are alienated to the educational institution and to society in general. They suggested that this alienation is due to the drastic cultural and institutional changes in the United States. Youth express resentment and indifference to those in authority. Adult decisions are increasingly being questioned by school-aged youth.

Disruptive behavior is not unique to any one area of the curriculum. Industrial arts teachers experience disruptive behavior incidents as do teachers of mathematics, English, and other subjects. Several research studies in industrial arts education have highlighted various classroom and laboratory discipline problems which industrial arts teachers experience. Research related to discipline problems in industrial arts has been explored by Harrison (1955),
Svendsen (1970), and Puckett (1976), but research and development in the field do not include efforts involving the development of instructional materials in the area of student disruptive behavior.

Discipline problems in education are not unique to the twentieth century. Lack of discipline in the schools was reported by Orcutt in 1871. Resolving conflicts between teachers and students through the study of the group life of a classroom and by effective communication between those involved in conflict was reported in the literature. The review of literature indicated the need to continue to study educational classroom and laboratory pupil-teacher behavior. Theories and developmental material involving the behavioral sciences, as they relate to student disruptive behavior, must continually be field tested. Reasonable classroom and laboratory rules that are enforced will assist in reducing discipline problems. Whenever possible rules should be decided upon jointly by faculty and students.

Educational leaders question the source and effectiveness of classroom control instruction in teacher education. School law is an increasingly complex area with direct implications and guidelines for handling student disruptive behavior. The last two decades have resulted in increased litigation activities affecting schools and teachers. Even the principle of "in loco parentis" has been contested in selected court cases.

Methods of discipline included corporal punishment, behavior modification, reality therapy, and other practices. Boonin (1979)
indicated that 40 states in the United States authorized school corporal punishment by law. Liability risks involving unreasonable use of corporal punishment have been increasing.

One of the major difficulties facing teacher education has been the shortage of appropriate instructional materials to present to in-service and pre-service teachers who will be or have been confronted with discipline problems. Research and developmental studies utilizing instructional simulation of classroom situations have been developed for the education of elementary teachers. Several studies reported in this chapter indicated the directions of these research and developmental efforts. Leaders in this effort also emphasize the exciting potential of instructional simulation in the field of education.

Instructional simulation has numerous advantages over conventional methods of instruction. These advantages include interaction between students and teachers, the potential for placing learners into a variety of different situations, and the potential to manipulate time-event concepts. Simulation that pertains specifically to student disruptive behavior problems in industrial arts laboratories has not been developed. The review of literature supports this position. Instructional simulation is a promising method for exercising decision-making behavior.
CHAPTER III

METHODS AND PROCEDURES

Introduction

The review of literature suggested the need for research and developmental efforts in the management of student disruptive behavior in classrooms and laboratories. As this study developed, there was evidence that simulation could be used to present student disruptive behavior problems encountered by industrial arts teachers in various laboratory and classroom settings. If these simulated problems were presented and decision-making situations were established, this material would provide a valuable instructional tool to be utilized in industrial arts teacher education.

The possibilities of identifying student disruptive behavior problems and simulating these problems through multi-media instruction soon led to the following needs: (1) to identify the significantly bothersome and frequently encountered student disruptive behavior problems as perceived by industrial arts teachers, (2) to develop an instructional system which would simulate selected behavior problems by incorporating audio-visual media, (3) to develop materials to be used with the simulations, and
(4) to field test the instructional prototype materials in several college or university industrial arts method courses for pre-service industrial arts teachers.

**Developing the IALPS Materials**

This section describes the methods and procedures employed in researching and developing the Industrial Arts Laboratory Problems Simulation (IALPS) materials. The procedures are presented in four parts:

1. The conceptualization of the IALPS Student Disruptive Behavior Check List and the completion of the survey to determine frequent and bothersome disruptive behavior problems is described.

2. Designing the IALPS prototype involving the selecting of an instructional model, experimenting with audio-visual media, and the selection of five disruptive behavior incidents is included.

3. Construction of the IALPS simulated incidents and other materials is described.

4. Field testing procedures are described.

**Conceptualization of the SDBCL**

Conceptualization was one of the first processes in formulating a structure to identify frequent and bothersome student disruptive behavior problems. Materials reviewed included books, dissertations, periodical articles, and instructional packages. These materials assisted in formulating the first stages of the study. An ERIC search by the Mechanized Information Center of The Ohio State University was helpful. Terms identified for the ERIC search
included: conflict, student-teacher relationships, decision-making, discipline, simulation, educational games, computer assisted instruction, instructional materials, and role playing. During the review of specific research, selected information was recorded and analyzed focusing on secondary student disruptive behavior problems. After an extensive examination of the available literature, it was concluded that an empirical data base for this study was not available.

The decision was made to develop a pilot survey-type instrument to identify specific student disruptive problems and thereby establish an empirical data base. This instrument was developed by using gerunds such as running, pushing, marking, etc. to construct the Behavior Assessment Study (Appendix A). Graduate students in the Department of Industrial Technology Education at The Ohio State University pilot tested the Behavior Assessment Study in 1974.

Several changes in the final instrument were necessary as a result of the pilot study. The pilot instrument contained a total of 32 statements to which the participants were asked to respond as to whether the problem was frequent and whether it was bothersome. There was a section in which participants were to list any other disruptive behaviors they had encountered when teaching industrial arts. The participants determined whether these disruptive behaviors were frequent or bothersome. A total of nine additional disruptive behavior statements resulted from the above request. Statements 19 and 24, of the pilot instrument, were omitted because
they were not checked as frequent or bothersome. The final instrument contained a total of 39 statements and was titled Student Disruptive Behavior Check List (Appendix B). The Student Disruptive Behavior Check List (SEBCL) was analyzed, typed, revised, and printed. A total of 1000 copies of this instrument was printed. The 400 printed copies were necessary because it was anticipated that a portion of teachers would not return the first instrument.

The next activity in this study involved the development of a complete list of Minnesota junior high and senior high school industrial arts teachers. A study of other states, beyond the researcher's home state, was not deemed necessary based upon the assumption that behavior problems do not vary, significantly, from state to state.

The Minnesota Industrial Arts Directory was utilized to identify industrial arts teachers in the various schools in the State of Minnesota. When analyzing this directory, it was found that a total of 47 school districts did not report the names of their industrial arts teachers in the directory. Several large school districts were included in this list, so it was necessary to contact these schools and request the names of their industrial arts teachers to form a complete population frame. A letter was sent to the school principal in each of these schools. The results were rewarding because all 47 school principals returned the completed information forms which identified industrial arts teachers in their school districts. The information form is referenced in Appendix C.
Upon completion of the population frame and the printing of the instrument, the participants were selected. Systematic sampling was employed to select a total of 300 industrial arts teachers. Utilizing a table of random numbers, the number nine was identified. The ninth name on the list of the 1,728 teachers was continually identified until a total of 300 industrial arts teachers was selected. The size of the sample was determined by referring to Parten's (1966) book titled *Surveys, Polls, and Samples*. In January of 1975, a total of 300 cover letters (Appendix D), Student Disruptive Behavior Check Lists, coffee pacs, and self-addressed postage-paid envelopes was mailed to each of the participants. The coffee pac was a package of instant dry-freeze coffee enclosed as a friendly incentive to each participant to complete the inventory.

The first mailing produced 216 SHECL inventories. To improve the return rate, a follow-up letter was written, typed, revised, and printed (Appendix E). This letter and a second SHECL were mailed to each of the 84 non-respondents. By April of 1975, a total of 38 additional inventories was returned. The third follow-up involved a simple random sample of the remaining three percent non-respondents. Each was contacted by telephone. A total of 256 Student Disruptive Behavior Check Lists was completed for a return of 85%. However, only 233 or 77.7% of the returned surveys were usable. Nearly all of the surveys which could not be analyzed were incompletely marked. The analysis of the Student Disruptive Behavior Check List was completed using the St. Cloud State University Computer Services for tallying the responses and computing the percentages for each problem.
statement. As a result of the data analysis, 15 disruptive behavior problems were identified as being significantly bothersome or frequent as indicated in Appendix F. A "significant" problem statement was judged to be one which was marked either bothersome or frequent by 50% of the participants who completed usable inventories.

Designing the Prototype Model

Design ideas in the early stages of this study were influenced by the research of Cruickshank (1971). The design model described by Twelker (1969) was partially utilized for the development and validation of the disruptive behavior simulation package (Figure 1).

Other materials reviewed for design suggestions in developing the Industrial Arts Laboratory Problems Simulation included Mager (1962), Popham and Baker (1970), and Baker and Schutz (1972).

An instructional decision-making prototype model was designed and prepared by focusing on several selected behavior problems which were both frequent and bothersome. An attempt was made to record various incidents with a 35mm slide camera and develop them into filmstrips. A cassette tape was used for the audio section.

A slide series was planned and organized at Olson Junior High School in Minneapolis with instructor Jim Erickson. Several difficulties occurred with this presentation. One disadvantage was the sensitivity of the junior high school students to the camera and tape recorder. Another disadvantage was that various simulated
DETERMINING WHAT TO TEACH

1. DEFINE INSTRUCTION PROBLEM

2. DESCRIBE THE OPERATIONAL EDUCATIONAL SYSTEM

3. RELATE OPERATIONAL SYSTEM TO INSTRUCTIONAL PROBLEM

4. SPECIFY BEHAVIORAL OBJECTIVES

5. GENERATE CRITERION MEASURES

DETERMINING HOW BEST IT MIGHT BE TAUGHT

6. DETERMINE APPROPRIATENESS OF SIMULATION

7. DETERMINE TYPE OF SIMULATION REQUIRED

8. DEVELOP SPECIFICATIONS FOR SIMULATION EXPERIENCE

9. DEVELOP SIMULATION SYSTEM PROTOTYPE

10. TRY-OUT SIMULATION SYSTEM PROTOTYPE

11. MODIFY SIMULATION SYSTEM PROTOTYPE

VALIDATING THE SYSTEM

12. CONDUCT FIELD TRIAL

13. MAKE FURTHER MODIFICATIONS

(Twelker, 1969, p. 66)

FIGURE 1

STEPS IN THE DESIGN OF AN INSTRUCTIONAL SIMULATION SYSTEM
incidents required pushing and shoving motions and other forms of disruptive behavior which were impossible to capture in still pictures.

The use of super 8mm sound motion picture film was also considered as a possible communication method. The main problems with this were the poor visual quality and the cost of transferring the film to 8mm cassettes which would eliminate threading the projector. Also with super 8mm projection, a sound-motion synchronizing problem developed since many teacher education institutions do not have access to super 8mm sound film equipment.

After conferring with audio-visual technology specialists in the Learning Resource Center at St. Cloud State University, it became evident that color-cassette television format or black and white television format would be efficient ways to proceed. An audio-visual approach was selected because of its effectiveness. Research by Dale (1954) and Wittich and Schuller (1973) support this.

During a feasibility meeting with personnel representing Television Services at St. Cloud State University, the following limitations were discussed: television equipment, studio props, lighting, production, talent, staff, and the difficulty with moving tools and equipment to the television studio. Considering these and other limitations, the following problem statements from the SDECL were selected to be produced on video tape. These five problem statements ranked third, fourth, fifth, seventh, and eighth among the 39 student disruptive behavior problems. They were:
1. Students damage benches and desk tops by drilling, carving, and marking.
2. Students abuse and waste materials.
3. Students damage the property of others.
4. Tools and instruments are taken by students and not returned.
5. Students refuse or do not do their part in cleaning and maintaining the laboratory.

Construction of the IALPS

Construction of the Industrial Arts Laboratory Problems Simulation (IALPS) involved the following: (1) reviewing commercially-produced classroom discipline products, (2) producing five simulated incidents, and (3) developing support materials.

The decision was made to examine commercially-produced materials concerned with discipline in schools. One commercially-produced filmstrip and audio tape program by Baker (1969) was titled Discipline. This program was reviewed and studied for possible use with other media that were developed as part of this study. These materials produced by Vincet Associates contained rules and suggestions concerning discipline which could be of value to elementary, middle school, and senior high school teachers. However, this material seemed to focus mainly on the elementary school. Many examples used in the filmstrip-audio tape program were related to discipline problems that occurred only on the elementary level. Another limitation of this program was that only hypothetical
classroom disciplinary situations were available. No laboratory
disciplinary problems were presented.

The author of this material, Eva L. Baker, established six
disciplinary rules. The instructor's manual describes the evaluation
section of this material as follows:

A three part examination based on the program's objectives
has been provided. The first question asks for a course of
action consistent with the principles advocated in the program.
Answers should be scored as correct if they are constant with
the six rule strategy described in the program. Part 2 focuses
on whether hypothetical teachers are behaving consistent with
the point of view advocated in the program. Part 3 asks for
the six rules described in the program. (p. 2)

A letter was sent to Vincet Associates requesting the possible
use of this program in conjunction with other media materials in
this study. No response to this request resulted in the decision
to omit the possible use of the Vincet materials.

A second instructional program commercially marketed by Science
Research Associates and developed by Donald Cruickshank (1969) was
completely reviewed and analyzed. This instructional material was
titled Inner-City Simulation Laboratory. Cruickshank described the
construction and purpose of his simulation laboratory as follows:

In constructing the Inner-City Simulations Laboratory,
the author's basic tasks were to determine the day to day
problems of inner-city teachers and then to create a life-
like setting in which these problems could unfold. (p. 9)

The Inner-City Simulation Laboratory was a complete instructional
system. This system included numerous functions and responsibilities
of an inner-city teacher including simulated discipline problems. A
total of 34 16mm films and written incidents were developed by
Cruickshank to simulate the day-to-day problems of inner-city teachers. These simulated inner-city classroom problems focus on fifty-grade students. The focus on elementary school disciplinary problems with no laboratory problems eliminated the need to request the possible use of the Inner-City Simulation Laboratory. However, Cruickshank's research and instructional system provided a considerable degree of influence for this study.

The next set of commercial materials reviewed was titled *Improving Classroom Discipline*. This material was produced by Bell and Howell Company through their audio-visual products division. Included in the set were six audio cassette tapes designed by Dr. William J. Gnagey (1972). After listening to each of these tapes, it appeared that at least three of these tapes would be excellent to introduce some considerations and discussions of discipline. The first tape was titled *Improving Classroom Discipline*. This tape basically involved an overview of discipline problems. Approximately six minutes of this tape were selected to be heard by field test pre-service teachers. The second tape was titled *How Effective Are Your Rules?* This tape involved the classification of various kinds of rules and was approximately 15 minutes in length. The third tape was titled *Why Do Your Students Make Trouble?* The contents of this tape discussed negative transfer, order, independence, and frustration. It was approximately 15 minutes in length. The decision was made to request the use of three of the six tapes from the series by Dr. Gnagey. Dr. Gnagey's letter of consent is referenced in
Appendix G. These three cassette tapes were to be used on the first day of the field testing at each university. A total of 36 minutes of listening time was required for the three cassette tapes.

The five previously selected student disruptive behavior incidents were simulated at the Television Services Center at St. Cloud State University. They were produced on three-quarter inch color television cassette tape. Students majoring in mass communications were the actors and actresses for the simulation. They were instructed orally concerning the roles they were to play. Scheduling of the television production was difficult due to the large number of people necessary to produce the simulated incidents. They included camera operators, audio specialists, a producer, performers, and other individuals. Producing the five televised incidents required a considerable amount of time because retakes were necessary. These materials were pilot tested during a pre-service workshop at Staples, Minnesota. Incident 1 was revised to improve visual quality.

An industrial arts teacher did not appear in any of the televised incidents. The role of the industrial arts teacher was to be assumed by pre-service teachers enrolled in in-tact classes. The simulated incidents were:

Statement 1: Students damage benches and desk tops by drilling, carving, and marking.
Incident 1: This incident began with a male student standing beside a small table. The student is holding a chisel used for separating wood. He places one edge of the chisel on the top of the table, applies downward and forward motion, and scratches a large "X" on the table top.

Statement 2: Students abuse and waste materials.

Incident 2: A student was working at a bench vise with a length of aluminum wire. The student placed the wire in the bench vise and bent the wire. He removed the wire from the vise, made several additional bends with his hands and threw the wire on the work table. Then he walked away from the area.

Statement 3: Students damage the property of others.

Incident 3: A female student was painting a product with an aerosol container of white paint. She looked around and, seeing no one in the room, she proceeded to spray the words, "teacher sucks," on the wall.

Statement 4: Tools and instruments are taken by students and not returned.

Incident 4: The incident begins with a student disassembling a small internal combustion engine. The student was using a wrench to remove a bolt. He examined the wrench, scanned the room, and, seeing no one was observing him, quickly placed the wrench in his jean pocket. The student then selected a screwdriver and appeared to be repairing the engine.

Statement 5: Students refuse to or do not do their part in cleaning and maintaining the laboratory.

Incident 5: This incident begins with a male student and a female student being disruptive during the cleaning of the laboratory. A floor broom was passed back and forth suggesting that both students were refusing to sweep the floor and maintain the laboratory work area. The incident terminated when the female student threw the broom to the floor and walked away.

The Industrial Arts Laboratory Problems Simulation (IALPS)

Response Form was developed for recording written decisions to each
simulated disruptive behavior incident (Appendix H). The response form encouraged the pre-service teachers to be involved in the simulation. Each response form consisted of three statements and was used during the field test. After each incident was viewed, the participant was to complete the response form by: (1) circling the incident number, (2) identifying the televised disruptive behavior, (3) stating a decision for each incident, and (4) listing alternative decisions for each incident.

Each of the 49 participants received a booklet containing five response forms. The procedure, as outlined in the teacher's guide (Appendix I), stated that the participants were to view Incident 1. Then the university field-test director would stop the video tape playback unit for several minutes. During this three to four minute pause, participants were requested to write a brief response to each statement on the form. This procedure was repeated for each of the five incidents.

Another instrument, the IALPS Attitude Inventory (Appendix J), was developed to sample instructional acceptance of the IALPS materials. This 26-item instrument was developed after examining other attitude scales which were concerned with assessment of specific instructional systems. The IALPS Attitude Inventory was completed after the participants had completed the IALPS Response Form. Instructional acceptance of the materials was determined by analyzing responses recorded on the IALPS Attitude Inventory. The field-test participants indicated their responses by selecting and
circling one of the five choices. A Likert-type scale was selected for this instrument. Participants were to select one of the following for each statement: strongly agree, agree, neutral, disagree, or strongly disagree. A 1 point to 5 point scale was utilized; this resulted in a range of possible scores from 26 to 130 for each of the participants.

The complete set of IALPS software materials included: (1) the three cassette tapes by Dr. Gnagy, (2) the television instruction and five simulated incidents, (3) a teacher's guide, (4) response form booklets, and (5) the attitude inventories. All software materials except the audio cassette tapes were developed by the researcher. Hardware for the field testing included: (1) a cassette tape player, (2) a three-quarter inch color television playback unit, and (3) a television monitor for appropriate viewing.

Field Testing Procedures

The procedures for field testing the IALPS materials involved identifying the criteria for the selection of field test locations. Selection criteria included geographical distance from St. Cloud, Minnesota, type of program major, number of industrial arts majors, number of industrial arts department faculty members, and other criteria. The 1977-78 ACIATE-NAITTE Directory proved helpful in locating names and addresses of higher education institutions. The selection criteria were applied and resulted in identifying ten universities.
Each of the ten universities was mailed a survey (Appendix K) to determine their willingness to participate in the field testing of the IALPS. The survey also determined which member of the industrial arts department to contact, the availability of classroom television, and the university's desired date for the field test. Nine institutions of higher education returned the survey indicating a member of their staff would participate. Out of the nine, three institutions of higher education were selected for participation. These universities were selected because of their large industrial arts teacher education programs. The participants were from intact groups. The three universities chosen included Illinois State University, Normal, Illinois; the University of Northern Iowa, Cedar Falls, Iowa; and the University of Wisconsin-Stout, Menomonie, Wisconsin.

The IALPS materials were sent to each of these universities during the 1977-78 academic year. Field testing of the IALPS materials required considerable time because only a single copy of the televised cassette tape incidents was available.

Two 50-minute sessions were required for completion of the field testing. On the first day the participants listened to the three tapes of Dr. Gnagey as previously described. The tapes were selected to help students put theory into practice. Information and theory obtained in methods courses should also be of value in the decision-making component of the IALPS.
On the second day of the testing, pre-service teachers listened to and viewed a televised introduction by the researcher. They were told they would assume the role of an industrial arts teacher (Appendix L) while they viewed the five disruptive behavior incidents. They were informed that they were to record their decisions in writing by using the IALPS Response Form. They also were requested to complete the IALPS Attitude Inventory. Complete directions for the use of the IALPS materials are presented in Appendix I.

Treatment of the Data

Instrumentation for data collection involved the development of three instruments. These instruments were the Student Disruptive Behavior Check List (SDBCL), the Industrial Arts Laboratory Problems Simulation (IALPS) Response Form, and the IALPS Attitude Inventory. Construct validity for the instruments was established with the assistance of Dr. George Farrah, College of Education, St. Cloud State University, St. Cloud, Minnesota.

Two-hundred thirty-three usable SDBCL instruments were collected and examined for possible scoring problems. The scoring of the SDBCL was completed by the St. Cloud State University Computer Services. Each of the 39 statements from the 233 usable returns was tallied. The number of "yes" or "no" tallies for frequent and bothersome responses were converted to percentages. As a result of the data analysis, 15 disruptive behavior problems were identified as being significantly bothersome or frequent as indicated in
Appendix F. A "significant" problem statement was judged to be one which was marked either bothersome or frequent by 50% of the participants who completed usable SBACL instruments.

Problem statements which ranked third, fourth, fifth, seventh, and eighth were selected as incidents to be simulated through the use of television. The decision to select these five incidents resulted after several meetings with television services personnel at St. Cloud State University. Possibilities and limitations concerning television equipment, studio props, lighting, production, talent, staff, and other factors were discussed at these feasibility meetings. Due to these television limitations, the five incidents were selected and produced on video tape.

The second instrument, the IALPS Response Form, required hand tabulation procedures. The investigator recorded all responses exactly as they appeared on each IALPS Response Form. Tabulated responses for this instrument are reported in Chapter IV. A total of three response statements formed the IALPS Response Form. The first response statement, "Identify the problem or explain what took place," was tabulated in one of three areas. They were: (1) desired responses, (2) other responses, and (3) no responses. The second statement was: "Identify the decision or action you would take." The tabulation and clustering for this statement were completed by analyzing the participants' responses and the grouping of common responses. For example, a response indicating: "Talk to the student about the problem," was a common response. The third
statement was: "Identify alternative decisions or actions." Common response groupings and direct quotations were recorded to assist in clustering responses to that statement. Tallies in each cluster for the response form were converted to percentages to assist in determining whether suggested decisions of field test participants were homogeneous.

The first response statement was helpful in assessing the subjective responses of participants to each of the five simulated disruptive behavior incidents. The assessment of subjective responses was based on the total responses of the 49 field test participants. The numerous response patterns reported in Chapter IV provided evidence that student decisions and alternative decisions for treating specific student disruptive behavior vary considerably.

The third instrument, the IALPS Attitude Inventory, was scored by St. Cloud State University Computer Services. A scoring key, as exhibited in Appendix M, was developed. Student responses to the 12 positive statements received ratings from 1 for strongly disagree (SD) to 5 for strongly agree (SA). The 14 negative statements received a rating of 1 for strongly agree (SA) and 5 for strongly disagree (SD). The selected computer program produced data for analysis which included the grand mean, the item mean, standard deviation, and standard error.

The 26 statements composing the IALPS Attitude Inventory were placed in six constructs for analysis purposes. These six constructs were: (1) instructional value, (2) time allotment, (3) role assumption, (4) psychological mood, (5) decision-making correctness,
and (6) field test conditions. These constructs were identified to assist the developer in the development and the revision of the IALPS materials.

Chapter Summary

The methods and procedures for this chapter were directed toward the feasibility of providing simulated decision-making experiences for industrial arts teachers. Student disruptive behavior incidents in secondary school industrial arts laboratories formed the specific content base for this study. A paper and pencil instrument was utilized to collect data. This instrument was titled the Student Disruptive Behavior Check List (SDBCL). The purpose of this instrument was to assess the frequent and bothersome disruptive behavior problems encountered by industrial arts teachers. The population for the SDBCL consisted of 1728 Minnesota industrial arts teachers. Systematic sampling was used to select the 300 teachers. A total of 233 usable SDBCL instruments was returned. This accounted for a return rate of 77.7%.

An analysis of the SDBCL survey disclosed 15 disruptive behavior problems that were frequent or bothersome. Five of these problems were selected for the development of simulated disruptive behavior incidents. Television, as well as cassette tapes, were employed in the development of the multi-media prototype materials. The design model by Twelker (1969) was selected to aid in the development of the stimulus materials. The complete packet of materials contained one three-quarter inch color video tape of the five simulated
incidents, three audio cassette tapes, a teacher's guide, response forms, and the attitude inventory.

The purpose of the television tape was to present specific student disruptive behavior incidents for pre-service and in-service teacher decision-making involvement. Information on improving classroom discipline was presented in each of the three audio tapes. The commercially-produced audio tapes were selected for the purpose of helping pre-service and in-service teachers with the decision-making process for each of the disruptive behavior incidents. The teacher's guide was designed to assist those individuals who directed the field testing of the IALPS materials. In the field testing, the three university directors were requested to use the teacher's guide before and during the presentation of the instructional simulations.

The IALPS Response Form and the IALPS Attitude Inventory instruments were developed for the purpose of collecting data on the decisions for each incident and for the assessment of the IALPS material from each field-test participant. Three brief written responses were requested from the undergraduate participants for each of the five televised incidents. The Attitude Inventory used a Likert-type response scale to assess the IALPS materials. Field testing of the IALPS materials was completed at Illinois State University, the University of Northern Iowa, and the University of Wisconsin-Stout. A total of 49 pre-service industrial arts teachers participated in the field test.
CHAPTER IV

ANALYSIS OF DATA

Introduction

The purpose of this chapter is to describe the findings of the study. A presentation and analysis of the data from the Student Disruptive Behavior Check List, the Industrial Arts Laboratory Problems Simulation Response Form, and the Industrial Arts Laboratory Problems Simulation Attitude Inventory are provided herein.

Analysis of the SDBCL

The Behavior Assessment Study was developed after a review of research. It was pilot tested, revised, and became the Student Disruptive Behavior Check List (SDBCL). The SDBCL was sent to 300 Minnesota secondary industrial arts teachers. They were asked to read and check "yes" or "no" to each of the 39 statements. Their responses indicated whether the stated disruptive behavior problems were frequent and whether they were bothersome.

As reported in Chapter III, a total of 233 usable SDBCL instruments was returned. This constituted 77.7% of the sample drawn from the larger population. The sampling error of the
population was estimated with the standard error of percentage (Kolstoe, 1969). The value obtained for the sampling error was .033 when .50 was considered as the true value. The response percentages of each statement on the SDBCL are located in Appendix N.

Thirty-nine disruptive behavior problem statements were listed on the Student Disruptive Behavior Check List (SDBCL). The rationale for the selection of specific problem statements was explained in Chapter III. Five specific problem statements were simulated for the field-test participants to view. The following five SDBCL problem statements were selected for simulating:

1. Students damage benches and desk tops by drilling, carving, and marking.
2. Students abuse and waste materials.
3. Students damage the property of others.
4. Tools and instruments are taken by students and not returned.
5. Students refuse or do not do their part in cleaning and maintaining the laboratory.

Analysis of the IALPS Response Form

This section will present the clustering and analyzing of responses collected from the undergraduate industrial arts students who participated in the field testing. These 49 participants were enrolled in university in-tact classes.

The first request on the response form was: "Identify the
"problem or explain what took place." Responses from field-test participants were clustered into one of the following:

1. Desired Response: A desired response was a subjective response that identified the disruptive behavior incident as the author of the study visually attempted to communicate the incident. For example, a desired response for Incident 1 would be: The disruptive student scratches a large "X" with a wood chisel into the top of a table. The student kicks one leg of the table as he exits the room.

2. Other Response: Other responses were defined as responses given by the participant based upon his/her perception of what occurred, and may have been based upon stimuli visually overlooked or misunderstood.

3. No Response: The participant did not provide a written response.

The second and third statements on the response form concentrated on a decision and alternative decisions for each of the five disruptive behavior incidents. Clustering responses of these statements included the following steps. First, the decisions and alternative decisions of each participant were recorded as written. The second step was to cluster all similar decisions and alternative decisions. The final step was to convert response tallies to percentages.

Many participants suggested several decisions and alternative decisions on their response forms. As a result of this, percentages
for the decision-making response sections were calculated on the total number of responses rather than the number of participants.

The next several pages of this chapter summarize the written responses of the 49 pre-service field-test participants. The following material is included: (1) the response form request statement, (2) a description of the televised disruptive behavior incidents, and (3) responses and data in percentages for each of the clustered responses.

Incident 1

Request Statement: Identify the problem or explain what took place.

Description: The disruptive student scratches a large "X" with a wood chisel into the top of a table. The student kicks one leg of the table as he exits the room.

Desired Response 88.4% Other Response 11.6% No Response 0%

Request Statement: My decision and action would be:

Response Percentage:

62.3% Require the disruptive student to sand and refinish the table before or after school.

24.6% Approach the student and question him. Determine the reason for his disruptive behavior.

3% Notify school authorities (principal or vice-principal) about the incident.

3% Have a firm talk with the student explaining that this release of anger is not tolerated.

*Response percentages not reported if less than 2%.
Incident 1 (continued)

Request Statement: My alternative decisions would be:

Response
Percentage:

14.9%  Contact the student's parents and explain the incident.
13.4%  Send the disruptive student to the principal's office.
13.4%  Discuss the disruptive behavior with the student. Ask the student why he did what he did.
10.4%  Make the student pay for damages to the table top.
  8.9%  Require the student to sand and refinish the table top.
  5.9%  Require the disruptive student to stay after school (detention) and perform extra duties.
  5.7%  Restrict the use of chisels and other tools, including power tools, for the disruptive student.
  4.1%  Remove the student from class; expel the student.
  2.9%  Talk sternly to the student and warn the disruptive student.

Incident 2

Request Statement: Identify the problem or explain what took place.

Description: A student bends a length of aluminum wire several times in a bench vise. He discards the wire on the work table and leaves the work area.

Desired Response 94.2%  Other Response 5.8%  No Response 0%

Request Statement: My decision and action would be:

Response
Percentage:

43%  Talk with the student to determine why he wasted materials.
Incident 2 (continued)

22% Require the student to pay for the wasted material and the replacement material.

7% Require the student to form the material and reuse the material.

3% Confront the student with the cost of wasting materials.

3% Assign the student another activity.

3% Repeat the material forming activity with the teacher assisting the student.

Request Statement: My alternative decisions would be:

Response
Percentage:

18.7% Offer to help the student with his project or complete an alternative project.

16.7% Require payment for the waste material.

14.5% Schedule a private talk with the student, discuss, and determine why he reacted as he did.

10.4% Have the student come in after school and clean the shop.

6.2% Try to calm the student and emphasize patience.

6.2% Seek outside help for this student to locate the student's problems.

6.2% Warn the student about his behavior.

4.1% Contact the parents and tell them of the situation.

4.1% Humiliate or embarrass the student.

4.1% Send the disruptive student to the principal.

4.1% Another student in his peer group with metalworking experience should assist the disruptive student.
Incident 3

Request Statement: Identify the problem or explain what took place.

Description: A female student spray paints the words "teacher sucks" on a wall in the industrial arts laboratory.

Desired Response 84.5%  Other Response 15.3%  No Response 0%

Request Statement: My decision and action would be:

Response
Percentage:

31% Talk to the student about the incident and determine why this incident occurred.
18.5% Require the student to remove the spray paint with paint remover.
17.6% Require the disruptive student to refinish the wall.
7.3% Send the disruptive girl to the principal's office.
4.1% Arrange a time to meet with the student and parents.
4.1% Require the student to pay for the damage to the wall.
4.1% Give the student extra assignments, e.g., require a five page typed paper on aerosol paint.
2.6% Detain the student after school.
2.6% Determine a solution to this problem with the disruptive student.

Request Statement: My alternative decisions would be:

Response
Percentage:

17.3% Send the student to the principal's office.
15.3% Require the parents of the disruptive student to confer with the industrial arts teacher.
13.1% Have the student clean the spray paint from the wall.
13.1% Have the student refinish the wall or pay for the cost of restoring the surface.
Incident 3 (continued)

11.5% Expel the disruptive student from the industrial arts class.

9.6% Arrange a meeting with the parents, student, principal, and teacher.

5.7% Determine if this student has discipline problems in other classes.

5.7% Warn the disruptive student of the seriousness of this incident.

5.7% Withhold various industrial arts laboratory privileges from the offender.

3.8% Require the student to remain after school.

3.8% Explain the incident and action taken to the total group the following day.

3.8% No alternative decisions listed.

Incident 4

Request Statement: Identify the problem or explain what took place.

Description: A senior high student is repairing a small gasoline engine. He stops work to examine the wrench he is using; he looks to the left and to the right to determine if anyone is observing him. The student assumes no one is observing him so he quickly places the wrench in his jean pocket.

Desired Response 100% Other Response 0% No Response 0%

Request Statement: My decision and action would be:

Response
Percentage:

28.5% Ask the disruptive student to return the wrench.

24.6% Discuss the missing wrench incident with the student.

9.1% Require a "check in" of all tools after every class period.
Incident 4 (continued)

5.2% The student would be given a warning.

5.2% Require the disruptive student to pay the retail price of the new replacement tool.

5.2% Refer the disruptive student to the school principal.

3.9% Withhold laboratory privileges for the disruptive student.

3.9% Require the entire class to pay for the tool replacement cost.

2.6% Suspend the disruptive student from the industrial arts class.

2.6% Require the disruptive student to meet with me after class.

2.6% Assign the disruptive student the responsibility for the laboratory tool panel.

2.6% Require the offender to pay double the retail price of the tool.

2.6% Request that the missing tool be left in a neutral place.

Request Statement: My alternative decisions would be:

Response

Percentage:

12.3% Require the parents of the student to confer with the teacher and principal.

9.2% Require extra assignments of the student (e.g., write a report on tool costs or care and use of tools).

9.2% Have an understanding talk with the student.

6.1% Improve the tool check-out system.

6.1% Expel the disruptive student from class.

6.1% Require the offender to pay for the wrench.
Incident 4 (continued)

6.1% No alternative decisions were suggested for this incident.

4.6% Require the disruptive student to return the tool.

4.6% Report the tool loss to the principal.

4.6% Bill the total class for the missing tool.

4.6% Detain the disruptive student after school and settle the problem.

3.1% Send a note to the parents of the student to inform them that their son was caught stealing a wrench from the shop.

3.1% Send the student to the principal's office.

3.1% Compromise with the student on a solution to the disruptive behavior problem.

3.1% Conduct a tool cabinet check and confront the disruptive student with the problem.

Incident 5

Request Statement: Identify the problem or explain what took place.

Description: Two students refuse to participate in sweeping and picking up waste paper and other materials which are on the floor of the laboratory.

Desired Response 94.2% Other Response 5.8% No Response 0%

Request Statement: My decision and action would be:

Response

Percentage:

34.4% Clean-up duty responsibilities would be discussed with the two students.

20.3% Develop a clean-up chart and assign duties to every student.

14.1% Require both disruptive students to "grab a broom" and sweep the shop.
Incident 5 (continued)

6.2% Both students will receive fewer evaluation points.

6.2% Require both students to sweep the entire shop floor for several weeks.

6.2% Require both students to stay in the shop until they finish clean-up duty.

4.6% Require one student to sweep one day and the other disruptive student to sweep the following day.

3.1% Determine whether the incident is a personal dispute between the two students.

3.1% Locate a second broom and require both students to sweep the floor.

3.1% Detain the two students after school.

Request Statement: My alternative decisions would be:

Response Percentage:

14.8% Require both disruptive students to sweep and clean-up the waste material.

14.8% No alternative decisions were suggested.

12.8% Detain the two disruptive students after school.

11.1% Assign cleaning duties which will separate the disruptive students.

9.3% Withhold privileges from the disruptive students.

7.6% Deduct part of the disruptive students' class grades if they refuse to sweep the floor.

5.5% Place both disruptive students on a detention list.

5.5% Establish written clean-up rules and emphasize the importance of a clean work area.

3.7% Talk to both students in an understanding way.

3.7% Check the laboratory clean-up chart for the specific duties of the two disruptive students.
Incident 5 (continued)

3.7% Develop a point system for laboratory clean-up.

3.7% Require the disruptive students to remain in a study area and prepare written reports on selected reading material.

The 49 undergraduate students who participated in the field testing responded with numerous decisions to the second and third statements of each incident. Incident 3 was a simulation involving a female student using an aerosal spray can painting the words, "Teacher Sucks." Incident 3 resulted in 8 field-test participants presenting responses which could not be recorded in the desired response group. It should be noted that all of the participants responded to the statement, "My decision and action would be," with one or more decisions concerning how they would manage this disruptive behavior.

Analysis of the IALPS Attitude Inventory

The instrument used to assess the attitude of the undergraduate students involved in the field testing consisted of a 26-item IALPS Attitude Inventory that requested the students to respond to negative and positive statements (Appendix J). The five-point scale responses were: strongly disagree, disagree, neutral, agree, and strongly agree.

The IALPS Attitude Inventory data were key punched. Positive statements received ratings from 1 for strongly disagree (SD) to 5 for strongly agree (SA). All negative statements received ratings
from 5 for strongly disagree to 1 for strongly agree (Appendix M). Using this 5-point scale, individual scores could vary from 26 points to 130 points.

Forty-nine usable Attitude Inventories were returned. The grand mean for the 49 undergraduate students in the field test was 94.59 with a standard deviation of 9.86 and a standard error of 1.41. The mean score per item on the Attitude Inventory was 3.64 and the standard deviation of each subject's average response was .38.

The undergraduate industrial arts students showed a positive attitude toward the IALPS material. An analysis was completed to determine whether the field-test participants approved or disapproved of the IALPS materials (Appendix O).

The response to statements 1, 2, 3, 4, 10, 11, 13, 16, 22, 23, 25, and 26 indicated that the undergraduate students had favorable attitudes toward the instructional value of the IALPS materials as presented in Table 1. The students felt that the IALPS was an effective means for presenting specific student disruptive behavior incidents in industrial arts laboratories. The materials would increase a future teacher's ability to respond to student disruptive behavior problems.

The opinion of the participants concerning the number of incidents, the time schedule for viewing, and the response to the incidents was determined by Statements 6 and 20 (Table 2). Most participants felt the number of incidents and time allotted for each written response were adequate.
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<td>.57</td>
</tr>
<tr>
<td></td>
<td>23</td>
<td>3.46</td>
<td>.89</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>4.02</td>
<td>.82</td>
</tr>
<tr>
<td></td>
<td>26</td>
<td>3.16</td>
<td>.94</td>
</tr>
</tbody>
</table>
TABLE 2
MEANS AND STANDARD DEVIATIONS OF FIELD TEST PARTICIPANT ATTITUDES TOWARD THE IALPS MATERIALS FOR THE CONSTRUCT, TIME ALLOTMENT

<table>
<thead>
<tr>
<th>Construct</th>
<th>Statement Number</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>6</td>
<td>3.73</td>
<td>.70</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>3.77</td>
<td>.79</td>
</tr>
</tbody>
</table>

Statements 5, 12, and 18 (Table 3) indicated that many field test participants felt uncertain as to role assumption. They were unsure in assuming that the disruptive students in the video-taped incidents were their students.

TABLE 3
MEANS AND STANDARD DEVIATIONS OF FIELD TEST PARTICIPANT ATTITUDES TOWARD THE IALPS MATERIALS FOR THE CONSTRUCT, ROLE ASSUMPTION

<table>
<thead>
<tr>
<th>Construct</th>
<th>Statement Number</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role Assumption</td>
<td>5</td>
<td>2.81</td>
<td>.99</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>4.10</td>
<td>.65</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>3.28</td>
<td>.93</td>
</tr>
</tbody>
</table>
Statements 7, 15, and 24 (Table 4) focused on the psychological moods of the participants. The participants indicated only a modest degree of discouragement and frustration as a result of viewing and participating in the simulated student disruptive behavior incidents.

### TABLE 4

<table>
<thead>
<tr>
<th>Construct</th>
<th>Statement Number</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological Mood</td>
<td>7</td>
<td>3.89</td>
<td>.58</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>3.91</td>
<td>.78</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>3.93</td>
<td>.68</td>
</tr>
</tbody>
</table>

In Statements 8, 19, and 21 the responses of the participants were neutral in regard to the construct, decision-making correctness. The item mean scores as reported in Table 5 support this contention. Statements 9 and 14 indicated that the field test conditions were favorable. Participants were not distracted during the field testing and they experienced only limited difficulties in viewing the television presentations. Table 6 summarizes the means and standard deviations for this construct.
TABLE 5
MEANS AND STANDARD DEVIATIONS OF FIELD TEST PARTICIPANT ATTITUDES TOWARD THE IALPS MATERIALS FOR THE CONSTRUCT, DECISION-MAKING CORRECTNESS

<table>
<thead>
<tr>
<th>Construct</th>
<th>Statement Number</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decision-making Correctness</td>
<td>8</td>
<td>3.04</td>
<td>.93</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>3.30</td>
<td>1.14</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>3.10</td>
<td>.98</td>
</tr>
</tbody>
</table>

TABLE 6
MEANS AND STANDARD DEVIATIONS OF FIELD TEST PARTICIPANT ATTITUDES TOWARD THE IALPS MATERIALS FOR THE CONSTRUCT, FIELD TEST CONDITIONS

<table>
<thead>
<tr>
<th>Construct</th>
<th>Statement Number</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field test Conditions</td>
<td>9</td>
<td>3.95</td>
<td>.78</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>3.81</td>
<td>.95</td>
</tr>
</tbody>
</table>

Statement 17 of the IALPS Attitude Inventory concerned interest of the participants in studying about disruptive behavior problems. This statement did not conform to any of the constructs so it was reported separately. The mean score for Statement 17 was 4.14 with a standard deviation of .76. It can be concluded that the field
test participants were interested in studying about disruptive behavior problems that exist in secondary school industrial arts laboratories.

**Chapter Summary**

The analysis of data was completed to assess the acceptability of the IALPS materials. The specific purpose of the analysis was to validate and make further modification in the materials. An analysis of the Student Disruptive Behavior Check List (SDBCL) indicates that Minnesota industrial arts teachers in the sample experienced a minimum number of frequent disruptive behavior problems. Appendix H indicates that only two student disruptive behavior problems were checked as frequent by 50% or more of the 233 Minnesota industrial arts teachers who returned usable instruments. The data support the contention that extreme behaviors such as fighting are not frequent behavior problems. The analysis of the SDBCL also supports the contention that 50% of the teachers in the sample consider 15 of the 39 problems to be bothersome.

Two paper and pencil instruments were developed to retrieve data from the 49 undergraduate industrial arts students who participated in the field testing. The specific purposes of the IALPS Response Form were: (1) to identify the subjective responses of participants to each incident and (2) to identify similar responses from the field-test participants regarding their decisions and
resulting actions taken to resolve the discipline problem in each simulated incident.

Over 90% of the participants indicated desirable responses to Incidents 2, 4, and 5. Over 80% of the participants indicated desirable responses for Incidents 1 and 3. This suggested a need for additional examination and possible revision of these two (1 and 3) televised incidents. Undergraduate participants suggested a number of decisions and alternative decisions for resolving the disruptive behavior problems in each simulated incident. The response percentages in this chapter support this observation.

The IALPS Attitude Inventory indicated that the participants responded favorably to the IALPS materials. The data supported this contention since the average of the item means was 3.64 and the standard deviation of each subject's average response was .38. The grand mean was 94.59, the standard deviation was 9.86, and the standard error of the mean was 1.41. Participants agreed that the IALPS was an effective means for presenting simulated disruptive behavior incidents. They also believed that the use of these materials would increase a future teacher's ability to respond to student disruptive behavior problems. These assertions were supported by the positive responses of undergraduate field-test participants to specific statements assessing this dimension of the IALPS materials. Participants also responded favorably to time allotment and field test conditions. Participants were less positive
concerning the constructs of role assumption and decision-making correctness.
CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

This chapter contains a summary, conclusions, and recommendations of the study. The summary includes a discussion of the background of the study, the research questions, the procedures used, and reports the findings or results related to the research questions. Conclusions are drawn from the findings. Finally, recommendations are made for improvement of the Industrial Arts Laboratory Problem Simulation (IALPS) materials and implications for educators and researchers are presented.

Summary

There is substantial evidence to indicate or support the contention that student disruptive behavior is a serious problem in the schools of America. Disruptive behavior problems are significant educational classroom and laboratory events. An examination of research in education substantiates that classroom and laboratory discipline problems and decision-making tactics remain largely unresearched.
Background of Study

Educators, parents, and students consistently communicate the fact that student disruptive behavior is a major problem in public schools in the United States. Results of major public opinion polls reported that discipline ranks at or near the top of each survey. The reasons for increased discipline problems with school youth are many. Educational leaders suggest that youth are alienated to the educational institution and to society in general. They suggested that this alienation is due to the drastic cultural and institutional changes in the United States. Youth express resentment and indifference to those in authority. Adult decisions increasingly are being questioned.

Disruptive behavior is not unique to any one area of the curriculum. Industrial arts teachers experience disruptive behavior incidents as do teachers of mathematics, English, and other subjects. Several recent research studies in industrial arts education have highlighted the various classroom and laboratory discipline problems experienced by industrial arts teachers. Circumstances related to discipline problems in industrial arts have been explored by Harrison (1955), Svendsen (1970), and Puckett (1976), but the research does not include studies involving the development of pre-service and in-service instructional materials in the area of student disruptive behavior.

The review of literature indicated the need to continue to study classroom and laboratory disruptive behavior. Theories and
developmental material related to student disruptive behavior must continue to be field tested.

Reasonable classroom and laboratory rules that are enforced will reduce discipline problems. Whenever possible, rules should be decided upon jointly by faculty and students. Educational leaders question the source and effectiveness of classroom control instruction in teacher education. An important part of discipline and classroom control includes the understanding of school law. School law is an increasingly complex area with direct implications and guidelines for handling student disruptive behavior. The last two decades have resulted in increased litigation activities affecting schools and teachers. Even the principle of "in loco parentis" is contested in selected court cases.

Methods of discipline in public education include corporal punishment, behavior modification, reality therapy, and other practices. Boonin (1979) indicated that 40 states in the United States authorize school corporal punishment by law. Liability risks involving unreasonable use of corporal punishment are increasing. Thus, other methods are more desirable and needed.

Several experts suggest that research studies in classroom control have been limited in number because instructional alternatives have not been identified or available. One instructional alternative is simulation. Simulation permits the manipulation of time and also the manipulation of significant classroom or laboratory events.
Future industrial arts teachers must learn to cope with student disruptive behavior problems before encountering them in real laboratory situations. This encountering of simulated disruptive behavior incidents with audio-visual media can provide valuable decision-making situations. Utilizing simulation, learners may make poor decisions, unwise decisions, or decisions which are neutral. However, they do not have to suffer the penalties. Another advantage of simulation is its potential for individualized instruction. Simulation also encourages the learner to synthesize facts, principles, and values from previous teacher education courses. Instructional simulation is a promising method for exercising decision-making behavior.

Research Questions

Five research questions guided this research and development effort. They are restated in the Results section which follows in this chapter.

Procedures Used

Student disruptive behavior incidents in secondary industrial arts laboratories formed the specific content base for this study. The population for the survey that was completed consisted of 1728 Minnesota industrial arts teachers. Systematic sampling was used to identify 300 teachers. A paper and pencil check list was developed to collect data concerning disruptive behavior problems. This instrument was titled the Student Disruptive Behavior Check List
(SIBCL). The purpose of this instrument was to assess the frequent and bothersome disruptive behavior problems encountered by industrial arts teachers.

Industrial arts teachers in the sample identified 15 frequent and bothersome student disruptive behavior problems. Five of these problems were selected for the development of simulated disruptive behavior incidents. Television and cassette tapes were employed in the development of the multi-media IALPS materials. Twelker's (1969) design model was selected to aid in developing the stimulus materials.

The complete packet of materials contained one three-quarter inch color video tape, three audio cassette tapes, a teacher's guide, the IALPS Response Form, and the IALPS Attitude Inventory. The purpose of the television tape was to present specific student disruptive behavior incidents for pre-service and in-service teacher decision-making involvement. Information for improving classroom discipline was presented in each of the three audio tapes. The audio tapes were selected for the purpose of helping pre-service and in-service teachers with the decision-making process for each of the disruptive behavior incidents. The teacher's guide was designed to assist those individuals who directed the field testing of the materials. The three university professors in the field test were requested to use the teacher's guide before and during the presentation of the IALPS materials.

The IALPS Response Form and Attitude Inventory instruments were developed for the purpose of collecting data on the decisions for each incident and for assessing the IALPS material from each field
test participant. Three brief written responses were requested on the Response Form for each televised incident. The Attitude Inventory used a Likert-type scale. Field testing of the IALPS material was completed at Illinois State University, the University of Northern Iowa, and the University of Wisconsin-Stout. In-tact classes consisting of 49 pre-service industrial arts teachers participated in the field test.

Results

The results of this study were based upon an analysis of data from the SI3BCL, the IALPS Response Form, and the IALPS Attitude Inventory. These instruments were designed to assist in the development of the materials and to answer the research questions. These questions were:

1. What bothersome student disruptive behavior problems occur in Minnesota secondary school industrial arts classrooms and laboratories?

The identification of bothersome disruptive behavior problems was requested of the 300 industrial arts teachers in this study. A total of 233 usable SI3BCL instruments was returned and analyzed. This accounted for a 77.7% return rate. A total of 15 bothersome problems was identified by secondary Minnesota industrial arts teachers as being significant. A "significant" student disruptive behavior problem statement was judged to be one which was marked by 50% of the persons in the sample who returned usable forms.
2. With what frequency do student disruptive behavior problems occur in the laboratory areas?

The data indicated only two disruptive behavior problems occurred frequently in Minnesota industrial arts laboratories. A significantly frequent problem was deemed as such if indicated on 50% of the usable instruments.

3. How will field-test participants respond to selected simulated incidents?

Over 90% of the participants indicated desirable responses to Incidents 2, 4, and 5. Over 80% of the participants indicated desirable responses for Incidents 1 and 3. This suggested a need for additional examination and possible revision of Incidents 1 and 3 of the IALPS materials.

4. Will decisions and reactions of field-test participants be homogeneous in regard to their suggestions for the treatment of each simulated disruptive behavior incident?

The analysis of the IALPS Response Form suggests that decisions and reactions of participants for treating the disruptive behavior in each incident were not homogeneous.

5. How acceptable will the simulation materials be when they are assessed by undergraduate industrial arts majors who are participating in the field testing of the materials?

The overall attitude grand mean of 94.59 from a possible 130 and a standard deviation of 9.86, support the contention that the IALPS materials were acceptable.
Conclusions

The following conclusions were established from the research and developmental efforts of this study. These conclusions are offered for the purpose of synthesizing both the major and minor dimensions of the study. A major weakness of any instructional simulation study is the subjective measurement problem. This measurement problem exists because several decisions or answers are often acceptable when responding to a specific simulated incident. Also, the methods for determining the accuracy of a response by an evaluator often are deficient in consistency and level of precision. The reader must appraise the following conclusions with an awareness of these limitations and weaknesses. The conclusions of the researcher are:

1. There are bothersome student disruptive behavior problems that can be identified by industrial arts teachers.
2. Few student disruptive behavior problems occur frequently in industrial arts laboratories.
3. Teacher-education students enrolled in industrial arts methods courses are able to identify and respond with some understanding to the IALPS simulated incidents.
4. Responses of students in teacher education were varied in regard to their suggested decisions and reactions for the treatment and control of disruptive behavior.
5. The IALPS materials were relatively well received by industrial arts pre-service teacher education students.
As a result of the experience in conducting this developmental study, various recommendations are presented. Two types of recommendations included here are: (1) recommendations for the improvement of the IALPS materials and (2) recommendations to educators and researchers.

Recommendations for the improvement of the IALPS materials include:

1. The IALPS instructional package should be expanded to include information pertaining to school law, alternative methods of controlling disruptive behavior, and additional time allotments for post simulation discussions involving interaction.

2. Incidents 1 and 3 should be re-examined for possible revision. The field tests support this recommendation, since less than 90% of the field test participants recorded desired responses.

3. Additional field testing of the IALPS material would have been desirable. Additional field testing should include the sampling of teacher education institutions from a larger geographical region.

4. The IALPS Response Form should be improved and should emphasize the importance of only one decision for the second response request.

5. The IALPS Attitude Inventory should be expanded by adding
additional items especially in the constructs of "role assumptions" and "field test conditions."

Recommendations to the educator and researcher include:

1. Due to large school populations and other factors, it would be desirable to develop specific simulated incidents of disruptive behavior involving junior high school students in an inner-city school industrial arts laboratory.

2. A study should be developed to simulate undesirable teacher behavior. This study may include teacher behavior which tends to provoke student disruptive behavior. Unclear directions, unreasonable requirements, and other behavior could be simulated.

3. The IALPS materials should be utilized to study the decision response patterns, as they apply to discipline problems, of highly dogmatic teachers.

4. A study similar to that suggested in the third recommendation should involve in-service teachers. How will humanistic teachers respond to IALPS incidents as contrasted to custodial teachers?

5. Research involving instructional simulations should be extended to the evaluation of laboratory instruction, curriculum development, and other areas of study in industrial arts.

6. Research and developmental efforts should include the addition of simulated disruptive behavior incidents. These
simulated incidents could include large groups or even total class misbehavior incidents.

7. A study should be designed to develop methods and procedures for collecting and analyzing data regarding achievement of psychological and pedagogical principles involved in classroom control.

8. Future studies should utilize independent raters to analyze the decisions on the IALPS Response Form. This would reduce researcher bias.

9. Future researchers should establish instrument reliability by using a test-retest method.
APPENDIX A

BEHAVIOR ASSESSMENT STUDY
PURPOSE: To determine what types of student disruptive behavior in industrial education are: 1) most frequent and 2) most bothersome.
DISRUPTIVE BEHAVIOR
SAMPLE STATEMENT

FREQUENT

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>(X)</td>
<td>( )</td>
</tr>
</tbody>
</table>

BOTHERSOME

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>( )</td>
<td>(X)</td>
</tr>
</tbody>
</table>

DIRECTIONS: Please look at the sample statement and one teacher's responses.

First, since this was a frequent student disruptive behavior problem as observed by this teacher, he placed an X in the "Yes" box under FREQUENT.

Second, since this was not bothersome disruptive behavior as considered by this teacher, he placed an X in the "No" box under BOTHERSOME.

Thus, this industrial education teacher responded to this statement in two ways.

IT IS VERY IMPORTANT THAT YOU RESPOND TO EVERY ITEM IN BOTH WAYS ALSO. THANK YOU.

STUDENT DISRUPTIVE BEHAVIOR CHECKLIST (SDBCL)

<table>
<thead>
<tr>
<th>FREQUENT</th>
<th>BOTHERSOME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes No</td>
<td>Yes No</td>
</tr>
<tr>
<td>( ) ( )</td>
<td>( ) ( )</td>
</tr>
<tr>
<td>1. Students damage the property of others.</td>
<td>( ) ( )</td>
</tr>
<tr>
<td>( ) ( )</td>
<td>( ) ( )</td>
</tr>
<tr>
<td>2. There is too much pushing and &quot;horse-play&quot; in the laboratory and shop.</td>
<td>( ) ( )</td>
</tr>
<tr>
<td>( ) ( )</td>
<td>( ) ( )</td>
</tr>
<tr>
<td>3. Tools and instruments are taken from the laboratory and not returned.</td>
<td>( ) ( )</td>
</tr>
<tr>
<td>( ) ( )</td>
<td>( ) ( )</td>
</tr>
<tr>
<td>4. Profanity and unnecessary talk are common.</td>
<td>( ) ( )</td>
</tr>
<tr>
<td>FREQUENT</td>
<td>BOTHERSOME</td>
</tr>
<tr>
<td>---------</td>
<td>------------</td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>()</td>
<td>()</td>
</tr>
<tr>
<td>5. Tools and instruments are broken by students, but not reported to the instructor.</td>
<td>()</td>
</tr>
<tr>
<td>6. Students are tardy or do not report to the laboratory promptly.</td>
<td>()</td>
</tr>
<tr>
<td>7. When a student is absent, the make-up work is not completed.</td>
<td>()</td>
</tr>
<tr>
<td>8. Students are not prepared for laboratory activities because they lack materials or material fee cards.</td>
<td>()</td>
</tr>
<tr>
<td>9. Students are not prepared for laboratory activities because they lack safety glasses or other safety equipment.</td>
<td>()</td>
</tr>
<tr>
<td>10. Students destroy books, information sheets, etc.</td>
<td>()</td>
</tr>
<tr>
<td>11. Students forget to bring books, written assignments, drawings, etc. to the laboratory.</td>
<td>()</td>
</tr>
<tr>
<td>12. Students steal another member's software materials including project plans, papers, etc.</td>
<td>()</td>
</tr>
<tr>
<td>13. Students damage a drawing or written assignment by marking, scribbling, or tearing another student's paper.</td>
<td>()</td>
</tr>
<tr>
<td>14. Students hide tools and instruments so that others cannot use them.</td>
<td>()</td>
</tr>
<tr>
<td>15. Students damage benches and desk tops by drilling, carving, and marking.</td>
<td>()</td>
</tr>
<tr>
<td>16. Students incorrectly install a saw blade or other assembly to fool others.</td>
<td>()</td>
</tr>
<tr>
<td>17. Students refuse or do not do their part in cleaning and maintaining the laboratory.</td>
<td>()</td>
</tr>
<tr>
<td>FREQUENT</td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>( ) ( )</td>
<td>18. Students remove tools and materials to another part of the school (e.g., science room) without permission.</td>
</tr>
<tr>
<td>( ) ( )</td>
<td>19. Students must be reminded not to eat candy or chew gum in the laboratory.</td>
</tr>
<tr>
<td>( ) ( )</td>
<td>20. Students mark the finishing room or other walls with spray paint or similar materials.</td>
</tr>
<tr>
<td>( ) ( )</td>
<td>21. Students run or chase each other in the laboratory area.</td>
</tr>
<tr>
<td>( ) ( )</td>
<td>22. Students touch a wet finish or damage the surface of another student's project.</td>
</tr>
<tr>
<td>( ) ( )</td>
<td>23. Students loaf or waste time by bothering others in the classroom.</td>
</tr>
<tr>
<td>( ) ( )</td>
<td>24. Students use cursing and name calling in the classroom and laboratory.</td>
</tr>
<tr>
<td>( ) ( )</td>
<td>25. Arguing and hostility are displayed relating to a grading mark or evaluation.</td>
</tr>
<tr>
<td>( ) ( )</td>
<td>26. Students whistle and make other noises which are heard in the classroom or laboratory.</td>
</tr>
<tr>
<td>( ) ( )</td>
<td>27. Students shout to each other above machine noise.</td>
</tr>
<tr>
<td>( ) ( )</td>
<td>28. Students fail to listen during lectures, discussions, and demonstrations.</td>
</tr>
<tr>
<td>( ) ( )</td>
<td>29. The substitute teacher is unable to control the group which results in student problems when you return.</td>
</tr>
<tr>
<td>( ) ( )</td>
<td>30. A student is caught cheating on an exam or quiz.</td>
</tr>
<tr>
<td>( ) ( )</td>
<td>31. Student fighting occurs involving the physical exchange of fists.</td>
</tr>
<tr>
<td>FREQUENT</td>
<td>BOTHERSOME</td>
</tr>
<tr>
<td>----------</td>
<td>------------</td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>( ) ( )</td>
<td>( ) ( )</td>
</tr>
</tbody>
</table>

32. Students borrow the instructor's set of laboratory keys and fail to return them.

OTHERS: (Below and on the back of this sheet, list any other disruptive behaviors that you have encountered in industrial arts and specify whether they are frequent or bothersome. Write "None" if you cannot recall any.)
APPENDIX B

STUDENT DISRUPTIVE BEHAVIOR CHECK LIST
DISRUPTIVE BEHAVIOR
SAMPLE STATEMENT

FREQUENT

Yes No

(X) ( ) Students disrupt the industrial arts teacher ( ) ( )
during a lecture or discussion.

DIRECTIONS: Please look at the sample statement and one
teacher's responses.

First, since this was a frequent student
disruptive behavior problem as observed by this
teacher, he placed an X in the "Yes" box
under FREQUENT.

Second, since this was not bothersome disruptive
behavior as considered by this teacher, he placed
an X in the "No" box under BOTHERSOME.

Thus, this industrial arts teacher responded to
this statement in two ways.

IT IS VERY IMPORTANT THAT YOU RESPOND TO EVERY
ITEM IN THE FREQUENT COLUMN AND EVERY ITEM IN
THE BOTHERSOME COLUMN. THANK YOU.

STUDENT DISRUPTIVE BEHAVIOR CHECK LIST (SDBCL)

FREQUENT

Yes No

( ) ( ) 1. Students damage the property of others. ( ) ( )

( ) ( ) 2. There is pushing and "horseplay" in the
laboratory or shop.

( ) ( ) 3. Tools and instruments are taken by
students and not returned.

( ) ( ) 4. Profanity and unnecessary talk are
prevalent in the classroom and
laboratory.

BOTHERSOME

Yes No

( ) ( ) 1. ( ) ( )

( ) ( ) 2. ( ) ( )

( ) ( ) 3. ( ) ( )

( ) ( ) 4. ( ) ( )
<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>( ) ( )</td>
<td>5. Tools and instruments are broken by students, but not reported to the instructor.</td>
<td>( ) ( )</td>
<td></td>
</tr>
<tr>
<td>( ) ( )</td>
<td>6. Students are tardy or do not report to the laboratory promptly.</td>
<td>( ) ( )</td>
<td></td>
</tr>
<tr>
<td>( ) ( )</td>
<td>7. When a student is absent, the make-up work is not completed.</td>
<td>( ) ( )</td>
<td></td>
</tr>
<tr>
<td>( ) ( )</td>
<td>8. Students are not prepared for laboratory activities because they lack materials or material fee cards.</td>
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<td></td>
</tr>
<tr>
<td>( ) ( )</td>
<td>9. Students are not prepared for laboratory activities because they lack safety glasses or other safety equipment.</td>
<td>( ) ( )</td>
<td></td>
</tr>
<tr>
<td>( ) ( )</td>
<td>10. Students destroy books, written sheets, etc.</td>
<td>( ) ( )</td>
<td></td>
</tr>
<tr>
<td>( ) ( )</td>
<td>11. Students forget to bring books, written assignments, drawings, etc. to the laboratory.</td>
<td>( ) ( )</td>
<td></td>
</tr>
<tr>
<td>( ) ( )</td>
<td>12. Students steal another member's software materials including project plans, paper, etc.</td>
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<td></td>
</tr>
<tr>
<td>( ) ( )</td>
<td>13. Students damage a drawing or written assignment by marking, scribbling, or tearing another student's paper.</td>
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<td></td>
</tr>
<tr>
<td>( ) ( )</td>
<td>14. Students hide tools and instruments so that others cannot use them.</td>
<td>( ) ( )</td>
<td></td>
</tr>
<tr>
<td>( ) ( )</td>
<td>15. Students damage benches and desk tops by drilling, carving, and marking.</td>
<td>( ) ( )</td>
<td></td>
</tr>
<tr>
<td>( ) ( )</td>
<td>16. Students incorrectly install a saw blade or other assembly to fool others.</td>
<td>( ) ( )</td>
<td></td>
</tr>
<tr>
<td>( ) ( )</td>
<td>17. Students refuse or do not do their part in cleaning and maintaining the laboratory.</td>
<td>( ) ( )</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
<td>Frequent</td>
<td>Bothersome</td>
</tr>
<tr>
<td>-----</td>
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<td>----------</td>
<td>-------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18. Students remove tools and materials to another part of the school (e.g., science room) without permission.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>19. Students mark the finishing room or other walls with spray paint or similar materials.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>20. Students run or chase each other in the laboratory area.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>21. Students touch a wet finish or damage the surface of another student's project.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>22. Students waste time or loaf by bothering others in the laboratory.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>23. Arguing and hostility are displayed relating to a grading mark or evaluation.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>24. Students whistle or make other noises which are heard in the classroom or laboratory.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>25. Students shout to each other above machine noise.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>26. Students fail to listen during lectures, discussions, and demonstrations.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>27. The substitute teacher is unable to control the group which results in student problems when you return.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>28. A student is caught cheating on an exam or quiz.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>29. Student fighting occurs involving the physical exchange of fists.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>30. Students borrow the instructor's set of laboratory keys and fail to return them.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>31. Students &quot;sneak out&quot; or leave the laboratory or classroom without permission.</td>
<td></td>
</tr>
<tr>
<td>FREQUENT</td>
<td>BOTHERSOME</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( ) ( )</td>
<td>32. Smoking occurs in certain parts of the laboratory or laboratory restrooms. ( ) ( )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( ) ( )</td>
<td>33. Students try to construct illegal weapons or articles such as zip guns, brass knuckles, lead billy clubs, etc. ( ) ( )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( ) ( )</td>
<td>34. Students shoot compressed air at other students or misuse compressed air. ( ) ( )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( ) ( )</td>
<td>35. Students steal projects or components of projects from the laboratory. ( ) ( )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( ) ( )</td>
<td>36. Students steal materials from the laboratory. ( ) ( )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( ) ( )</td>
<td>37. Students &quot;tinker&quot; and adjust machines, etc. ( ) ( )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( ) ( )</td>
<td>38. Students abuse and waste materials. ( ) ( )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( ) ( )</td>
<td>39. Students complete laboratory work, but with little regard to the quality of the assignment. ( ) ( )</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

OTHERS: Please list any other disruptive behaviors that you have encountered in industrial arts and specify whether they are frequent or bothersome. Write "None" if you cannot recall any. Thank you.

When Completed Insert This Form Into The Addressed and Stamped Envelope Provided

Thank you for your help with this study.
APPENDIX C

INFORMATION FORM
Dear Sir:

For my dissertation research at The Ohio State University I need a complete list of all junior and senior high school industrial arts teachers in Minnesota. Teachers in your school district were not listed in the current Industrial Education Teacher Directory. Please help me by completing and returning the following information.

An early return will be appreciated. Thank you for your assistance.

Sincerely,

Lorimer Bjorklund

<table>
<thead>
<tr>
<th>Instructor's Name</th>
<th>Jr. High</th>
<th>Sr. High</th>
<th>Name of School</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( )</td>
<td>( )</td>
<td></td>
</tr>
<tr>
<td></td>
<td>( )</td>
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<td>( )</td>
<td>( )</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX D

COVER LETTER
Dear Industrial Arts Teacher:

Please use the coffee pack to have a cup of coffee while you give me ten minutes of your time. I am asking you and other industrial arts teachers in Minnesota to complete and return the enclosed inventory. The purpose of this inventory is to determine which student disruptive behaviors are most frequent and most bothersome in industrial arts laboratories. The results of this study will contribute to the field of industrial arts teacher education and will be used in my doctoral dissertation at The Ohio State University.

Please use the self-addressed, postage paid envelope to return the inventory. Your cooperation is most appreciated. Thank you.

Sincerely,

Lorimer Bjorklund

Lorimer Bjorklund
Dear Industrial Arts Teacher:

Recently I mailed you an inventory entitled "Minnesota Student Behavior Assessment Study." I have not received your completed inventory at this time. Your completed inventory would be greatly appreciated and could result in an excellent percentage of returns. If you have already completed the first inventory, I deeply appreciate your assistance and there is no need to fill out the enclosed instrument.

If you did not complete the first inventory I hope that you will find time (about 10 minutes) to complete and return this one. I realize that there are many pressing demands on your time, but I hope you can find a few minutes to assist industrial arts teacher education and help me in my research.

The purpose of this inventory is to determine which student disruptive behaviors are most frequent and most bothersome in industrial arts laboratories. Your responses will be held in confidence. As you can see by the inventory I am not interested in identifying specific schools or teachers, so there is no need for you to sign your name on the inventory.

Please use the self-addressed, postage paid envelope to return the inventory. Thank you for your cooperation in helping me complete my research.

Sincerely,

Lorimer Bjorklund
APPENDIX F

FIFTEEN DISRUPTIVE BEHAVIOR PROBLEMS
Fifteen Disruptive Behavior Problems from the Student Disruptive Behavior Check List Identified as Being Significantly Bothersome or Frequent

<table>
<thead>
<tr>
<th>Rank</th>
<th>Item on SDBCL</th>
<th>Problem Statement</th>
<th>Bothersome</th>
<th>Frequent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>26</td>
<td>Students fail to listen during lectures, discussions, and demonstrations.</td>
<td>.77\textsuperscript{a}</td>
<td>.57\textsuperscript{b}</td>
</tr>
<tr>
<td>2</td>
<td>22</td>
<td>Students loaf or waste time by bothering others in the laboratory.</td>
<td>.75</td>
<td>.57</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>Students damage the property of others.</td>
<td>.70</td>
<td>.23</td>
</tr>
<tr>
<td>4</td>
<td>38</td>
<td>Students abuse and waste materials.</td>
<td>.70</td>
<td>.48</td>
</tr>
<tr>
<td>5</td>
<td>15</td>
<td>Students damage benches and desk tops by drilling, carving, and marking.</td>
<td>.66</td>
<td>.38</td>
</tr>
<tr>
<td>6</td>
<td>39</td>
<td>Students complete laboratory work, but with little regard to the quality of the assignment.</td>
<td>.65</td>
<td>.48</td>
</tr>
<tr>
<td>7</td>
<td>17</td>
<td>Students refuse or do not do their part in cleaning and maintaining the laboratory.</td>
<td>.62</td>
<td>.44</td>
</tr>
<tr>
<td>8</td>
<td>3</td>
<td>Tools and instruments are taken by students and not returned.</td>
<td>.61</td>
<td>.24</td>
</tr>
<tr>
<td>9</td>
<td>11</td>
<td>Students forget to bring books, written assignments, drawings, etc. to the laboratory.</td>
<td>.60</td>
<td>.49</td>
</tr>
<tr>
<td>10</td>
<td>5</td>
<td>Tools and instruments are broken by students, but are not reported to the instructor.</td>
<td>.59</td>
<td>.28</td>
</tr>
<tr>
<td>11</td>
<td>35</td>
<td>Students steal projects or components of projects from the laboratory.</td>
<td>.58</td>
<td>.24</td>
</tr>
<tr>
<td>Rank</td>
<td>SDBCL</td>
<td>Problem Statement</td>
<td>Bothersome</td>
<td>Frequent</td>
</tr>
<tr>
<td>------</td>
<td>-------</td>
<td>----------------------------------------------------------------------------------</td>
<td>------------</td>
<td>----------</td>
</tr>
<tr>
<td>12</td>
<td>36</td>
<td>Students steal materials from the laboratory.</td>
<td>.56</td>
<td>.22</td>
</tr>
<tr>
<td>13</td>
<td>2</td>
<td>There is pushing and &quot;horse-play&quot; in the laboratory or shop.</td>
<td>.56</td>
<td>.20</td>
</tr>
<tr>
<td>14</td>
<td>37</td>
<td>Students &quot;tinker&quot; and adjust machines, etc.</td>
<td>.53</td>
<td>.27</td>
</tr>
<tr>
<td>15</td>
<td>21</td>
<td>Students touch a wet finish or damage the surface of another student's project.</td>
<td>.51</td>
<td>.17</td>
</tr>
</tbody>
</table>

\[^a\] Proportion of industrial arts teachers (N = 233) who indicated that a specific problem was bothersome.

\[^b\] Proportion of industrial arts teachers (N = 233) who indicated that a specific problem occurred frequently.
APPENDIX G

GNAGGY'S LETTER OF CONSENT
Mr. Lorimer Bjorklund  
College of Industry  
St. Cloud State University  
St. Cloud, Minnesota 56301  

Dear Mr. Bjorklund:

I am happy to give you permission to use portions of my Instructional Dynamics Incorporated tape, Improving Classroom Discipline, for strictly research purposes. You should seek the company’s permission also.

Your dissertation sounds fascinating, and I would like to view your simulation incidents. They might be useful in my Educational Psychology classes.

Best of luck on your venture. Let me know if I can be of any further help.

Cordially,

William J. Gnagey, Director  
Professor of Psychology

cc: Instructional Dynamics Inc.  
166 E. Superior Street  
Chicago, Illinois 60611

Illinois State University
APPENDIX H

RESPONSE FORM FOR IALPS
Assume that you are the instructor or teacher and these student disruptive behavior problems occurred in your laboratory or shop.

1. Identify the problem or explain what took place.

2. My decision and action would be:

3. My alternative decisions would be:
APPENDIX I

TEACHER'S GUIDE
TEACHER'S GUIDE

Lorimer Bjorklund

1977-78
PREFACE

The Industrial Arts Laboratory Problems Simulation (IALPS) is a program designed for teacher education. This program can be utilized by both in-service and pre-service teachers. The IALPS is designed to help bridge the gulf between the college classroom and the industrial arts classrooms and laboratories in secondary schools. This program was developed to complement method course instruction in the preparation of industrial arts teachers so that they can work more effectively in the laboratory and classroom environments of secondary schools.

In order to develop an understanding and establish a data base, a series of activities was undertaken beginning in the fall of 1974. With the assistance of Dr. Willis E. Ray, The Ohio State University, a study was initiated to determine a taxonomy of disruptive behavior problems. An inventory type instrument was developed and pilot tested. The final instrument was mailed to a random sample of 300 Minnesota secondary industrial arts teachers. Frequency and bothersome disruptive behavior problems were derived from the 233 usable returns. This data constituted the basis for recreating the more common disruptive behavior problems that industrial arts teachers encounter. Three universities located in the Midwest were selected to field test and evaluate the materials.
EXPLANATION OF THE INSTRUCTIONAL SYSTEM

The Industrial Arts Laboratory Problems Simulation package is a comprehensive and innovative two hour pre-service and in-service teacher education package involving decision-making in student disruptive behavior problems. A major goal of this instructional package is to simulate frequent, as well as bothersome, deviant behavior problems as identified by a survey of industrial arts teachers. The IALPS provides a simulated student disruptive behavior problem which requires the viewer to work toward solutions and decisions to solve the incidents which occur in the industrial arts laboratory. These decisions should be in the best interests of the student and based upon suggestions by research and educational psychology.

When implemented in a pre-service program in undergraduate teacher education, IALPS is designed to complement a methods course which includes a unit on classroom control or discipline. A student disruptive behavior problem is defined as any problem that disrupts effective student and teacher interaction.
OBJECTIVES - For field test

At the conclusion of viewing these prototype materials, the viewer should be able to:

1. Given the Industrial Arts Laboratory Problems Simulation presentation, accomplish the following in written form for each incident: (1) identify the problem, (2) state a solution to the problem, and (3) suggest alternative solutions.

2. Assess the Industrial Arts Laboratory Problems Simulation by responding to an instruction attitude inventory.
FIELD TEST

Directions for use:

1. Inspect and identify all software materials. See checklist fastened on to color cassette tape.

2. Examine teacher's guide and student materials.

3. Preview all materials.
   3.1 Review Dr. Gnagey's cassette tapes.

4. View video cassette simulations.
   4.1 Check counter for location of each incident. Set counter at zero.
   4.2 Review operating procedure for video set playback if you will be operating the machine.

5. Review IALPS Response Form and Attitude Inventory.

6. Day One of Field Test - use Dr. Gnagey's tapes.

7. Day Two of Field Test - students view color video cassette materials. Answer questions after each incident. Distribute Attitude Inventory to students and complete inventory.

8. Package and return all materials.
INSTRUCTIONS

Cassette Tape #1  IMPROVING CLASSROOM DISCIPLINE
By Dr. Gnagey  OVERVIEW
Use approximately six (6) minutes of the tape.
Stop the tape when Dr. Gnagey discusses each tape
in the series.

Cassette Tape #2  IMPROVING CLASSROOM DISCIPLINE
By Dr. Gnagey  HOW EFFECTIVE ARE YOUR RULES?
Listen to all of this side, approximately fifteen
(15) minutes.
Contents:

Teachers comment on rules.

Classification of behavior -

1. Immoral
2. Illegal
3. Dangerous
4. Violate rights of others
5. "Bug" the teacher

Cassette Tape #3  IMPROVING CLASSROOM DISCIPLINE
By Dr. Gnagey  WHY DO YOUR STUDENTS MAKE TROUBLE?
Listen to all of this side, approximately fifteen
(15) minutes.
Contents:

Negative transfer

Order
Independence

Frustration - academic, social, physical
INSTRUCTION FOR THE VIDEO TAPE

Before starting the video tape, distribute the student manuals and ask the students to turn to the first page. Briefly discuss what they will be looking for in the video tape. Play the Introduction and Incident #1. At the start of Incident #1, cut the volume since there is no voice in any of the incidents. At the end of each incident there is a fifteen (15) to twenty (20) second blank section on the tape. After viewing Incident #1 have the student circle Incident #1 on the first page, sign their name and answer the three (3) questions. Allow approximately three (3) minutes for this. Briefly discuss - one (1) to three (3) minutes. As you press the STOP button, the unit will rewind so that you will review the incident and then proceed to show the next incident. Mark the next page as before and finish the incidents in the same way.

There are a total of five incidents. The times are as follows:

Incident #1 - 5 seconds
#2 -15 seconds
#3 -40 seconds
#4 -40 seconds
#5 -25 seconds

Upon completion of the video tape and discussion of Incident #5, distribute the Attitude Inventory and have the student complete. Collect all the student manuals and the attitude inventories. If there are questions or problems, call me collect at 612-252-3268. Thanks!
SUGGESTED REFERENCES CONCERNING DISCIPLINE


*Selections from readings


2. "Secondary school discipline" by Knute Larson and others, p. 32.


1. "The nature and purpose of discipline" by John E. Cooper, pp. 11-14.
APPENDIX J

IALPS ATTITUDE INVENTORY
INDUSTRIAL ARTS LABORATORY PROBLEMS SIMULATION

ATTITUDE INVENTORY

Directions: Below are statements about the audiovisual material you have viewed.

There are no right or wrong answers. Circle your honest, overall reaction to the Student Disruptive Behavior Problems material.

Read each statement below and indicate how much you agree or disagree with it according to the following scale:

Strongly disagree D disagree N neutral A agree SA strongly agree

Circle your answer with pen or pencil. If you change your mind on an answer write "this one" on the correct answer.

1. I would like to view and respond to additional simulated student disruptive behavior incidents..................................................SD
   D N A SA

2. The material presented was helpful to me as a future teacher..................................................SD
   D N A SA

3. The incidents were too specific..................................................SD
   D N A SA

4. The material presented will help me to solve discipline problems in an industrial arts laboratory..................................................SD
   D N A SA

5. While viewing these simulations I almost felt that the students were my students..................................................SD
   D N A SA

6. In view of the time allowed for participation I felt that too many incidents were presented..................................................SD
   D N A SA
<table>
<thead>
<tr>
<th>Number</th>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>I became easily discouraged with the video tape incidents.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>8</td>
<td>I was not sure how much decision making I did while viewing this material.</td>
<td></td>
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</tr>
<tr>
<td>9</td>
<td>There were too many distractions when viewing this material.</td>
<td></td>
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<tr>
<td>10</td>
<td>The material which I viewed will help me when I teach a laboratory class.</td>
<td></td>
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<tr>
<td>11</td>
<td>These simulation materials did not seem any more valuable than talking about discipline problem in class.</td>
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</tr>
<tr>
<td>12</td>
<td>I felt that I wanted to do my best when identifying the problem and deciding on a course of action.</td>
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</tr>
<tr>
<td>13</td>
<td>This material has increased my ability to respond to student disruptive behavior problems.</td>
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<tr>
<td>14</td>
<td>I had difficulty viewing the television receiver or set.</td>
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</tr>
<tr>
<td>15</td>
<td>I felt frustrated by the video tape materials.</td>
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</tr>
<tr>
<td>16</td>
<td>This is a poor way for me to experience student disruptive behavior problems.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>17</td>
<td>I am interested in trying to find out more about discipline problems.</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>18</td>
<td>While taking this instruction I felt like I was the industrial arts teacher.</td>
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</tr>
<tr>
<td>19.</td>
<td>I felt uncertain as to my performance in identifying the disruptive behavior problem</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>There was adequate time to list my decisions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21.</td>
<td>I felt uncertain as to my performance in decision making</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.</td>
<td>The incidents presented were too difficult for me</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23.</td>
<td>This was a very good way to study student disruptive behavior problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24.</td>
<td>I felt very uneasy while viewing the incidents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.</td>
<td>Participating in this activity was a poor use of my time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26.</td>
<td>I like the way the incidents were presented</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX K

FIELD TEST SURVEY
FIELD TEST SURVEY

INDUSTRIAL ARTS LABORATORY PROBLEMS SIMULATION

WHEN: Autumn quarter or first semester

WHERE: At selected higher education institutions in the central states region

HOW: Using classroom television and software materials during two class sessions of approximately 50 minutes each

PARTICIPATION: Check one

( ) Our department will conduct this field test.

( ) Our department cannot be of assistance.

EQUIPMENT: Check one

( ) Our institution has 3/4" color television cassette equipment.

( ) Our institution has 1/2" black and white television equipment.

( ) We do not have this equipment.

The specific department member who might be interested in this field study is ____________________________________________.

We would need all field test materials by _____________________(month)

and ____________________ (day).

At your earliest convenience, please return this survey in the enclosed envelope. Thank you.

Lorimer Bjorklund
Industrial Education Department
St. Cloud State University
APPENDIX L

IALPS TELEVISION INTRODUCTION
Hello, I'm L. R. Bjorklund, Assistant Professor at St. Cloud State University, St. Cloud, Minnesota. I'm interested in helping you to become a more effective industrial arts teacher. One type of problem that we have in our schools and school laboratories has been the discipline problem. What can we do about the discipline problem? Sometimes people will say, Use your intuition, or, Do just what comes naturally. But really those are probably not good answers when a teacher is faced with certain kinds of problems. Okay, as we look at some discipline problems, I want you to keep in mind that there are some things that educators can do for you.

For example, we can ask the question, What does the research say? What do some of the studies show we can do about some of the disruptive behavior problems in your laboratories and in the classrooms in the nation? As we view some of these kinds of problems, I want you to keep in mind several things. One is, You are assuming the role of the teacher. Secondly, the students are your responsibility and you will need to make the decision as to what you would do with this disruptive behavior problem.

The viewing of each incident will take place rather quickly, so I want you to focus and concentrate on what you see and after we finish viewing the incident, I would like to have you do three things. First, I would like to have you identify the problem. Second, tell me what you would do about the problem, what action would you take? And, third, I would like to have you think of some alternate actions...
and also decisions you might make. Okay, let's view situation No. 1.
APPENDIX M

SCORING KEY
SCORING KEY

INSTRUCTION ATTITUDE INVENTORY

1. positive 14. negative
2. positive 15. negative
3. negative 16. negative
4. positive 17. positive
5. positive 18. positive
6. negative 19. negative
7. negative 20. positive
8. negative 21. negative
9. negative 22. negative
10. positive 23. positive
11. negative 24. negative
12. positive 25. negative
13. positive 26. positive

Example

Item 1 responses if circled, score 1 2 3 4 5 positive statement

Item 3 responses if circled, score 5 4 3 2 1 negative statement
APPENDIX N

RESPONSE PERCENTAGES FOR FREQUENT AND BOthersome PROBLEMS
1. Students damage the property of others.

   Frequent                  Bothersome*
   Yes 23.2%  No 76.8%        Yes 70.0%  No 29.6%

2. There is pushing and "horseplay" in the laboratory or shop.

   Frequent                  Bothersome*
   Yes 20.2%  No 79.8%        Yes 56.2%  No 43.3%

3. Tools and instruments are taken by students and not returned.

   Frequent                  Bothersome
   Yes 24.0%  No 76.0%        Yes 60.5%  No 39.5%

4. Profanity and unnecessary talk are prevalent in the classroom and laboratory.

   Frequent                  Bothersome
   Yes 29.2%  No 70.8%        Yes 48.1%  No 51.9%

5. Tools and instruments are broken by students, but are not reported to the instructor.

   Frequent                  Bothersome
   Yes 28.3%  No 71.7%        Yes 58.8%  No 41.2%

6. Students are tardy or do not report to the laboratory promptly.

   Frequent                  Bothersome
   Yes 28.3%  No 71.7%        Yes 46.8%  No 53.2%

7. When a student is absent, the make-up work is not completed.

   Frequent                  Bothersome*
   Yes 31.8%  No 68.2%        Yes 32.6%  No 67.0%

8. Students are not prepared for laboratory activities because they lack materials or material fee cards.

   Frequent*                 Bothersome*
   Yes 15.9%  No 83.7%        Yes 27.0%  No 72.1%

9. Students are not prepared for laboratory activities because they lack safety glasses or other safety equipment.

   Frequent                  Bothersome
   Yes 8.2%  No 91.8%        Yes 23.2%  No 76.8%
10. Students destroy books, written sheets, etc.

<table>
<thead>
<tr>
<th>Frequent</th>
<th>Bothersome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes 17.6%</td>
<td>No 82.0%</td>
</tr>
<tr>
<td>Yes 39.5%</td>
<td>No 60.5%</td>
</tr>
</tbody>
</table>

11. Students forget to bring books, written assignments, drawings, etc. to the laboratory.

<table>
<thead>
<tr>
<th>Frequent</th>
<th>Bothersome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes 48.9%</td>
<td>No 51.1%</td>
</tr>
<tr>
<td>Yes 59.7%</td>
<td>No 40.3%</td>
</tr>
</tbody>
</table>

12. Students steal another member's software materials including project plans, paper, etc.

<table>
<thead>
<tr>
<th>Frequent</th>
<th>Bothersome*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes 13.3%</td>
<td>No 86.7%</td>
</tr>
<tr>
<td>Yes 41.2%</td>
<td>No 58.4%</td>
</tr>
</tbody>
</table>

13. Students damage a drawing or written assignment by marking, scribbling, or tearing another student's paper.

<table>
<thead>
<tr>
<th>Frequent</th>
<th>Bothersome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes 12.9%</td>
<td>No 87.1%</td>
</tr>
<tr>
<td>Yes 39.9%</td>
<td>No 60.1%</td>
</tr>
</tbody>
</table>

14. Students hide tools and instruments so that others cannot use them.

<table>
<thead>
<tr>
<th>Frequent</th>
<th>Bothersome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes 11.6%</td>
<td>No 88.4%</td>
</tr>
<tr>
<td>Yes 38.2%</td>
<td>No 61.8%</td>
</tr>
</tbody>
</table>

15. Students damage benches and desk tops by drilling, carving, and marking.

<table>
<thead>
<tr>
<th>Frequent</th>
<th>Bothersome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes 37.8%</td>
<td>No 62.2%</td>
</tr>
<tr>
<td>Yes 65.7%</td>
<td>No 34.3%</td>
</tr>
</tbody>
</table>

16. Students incorrectly install a saw blade or other assembly to fool others.

<table>
<thead>
<tr>
<th>Frequent</th>
<th>Bothersome*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes 3.0%</td>
<td>No 97.0%</td>
</tr>
<tr>
<td>Yes 25.8%</td>
<td>No 74.2%</td>
</tr>
</tbody>
</table>

17. Students refuse or do not do their part in cleaning and maintaining the laboratory.

<table>
<thead>
<tr>
<th>Frequent*</th>
<th>Bothersome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes 44.2%</td>
<td>No 54.9%</td>
</tr>
<tr>
<td>Yes 61.8%</td>
<td>No 37.3%</td>
</tr>
</tbody>
</table>

18. Students remove tools and materials to another part of the school (e.g., science room) without permission.

<table>
<thead>
<tr>
<th>Frequent</th>
<th>Bothersome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes 10.7%</td>
<td>No 89.3%</td>
</tr>
<tr>
<td>Yes 35.2%</td>
<td>No 64.8%</td>
</tr>
</tbody>
</table>
19. Students mark the finishing room or other walls with spray paint or similar materials.

<table>
<thead>
<tr>
<th>Frequent*</th>
<th>Bothersome*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes 23.2%</td>
<td>No 76.8%</td>
</tr>
<tr>
<td>Yes 43.3%</td>
<td>No 56.2%</td>
</tr>
</tbody>
</table>

20. Students run or chase each other in the laboratory area.

<table>
<thead>
<tr>
<th>Frequent</th>
<th>Bothersome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes 15.9%</td>
<td>No 84.1%</td>
</tr>
<tr>
<td>Yes 47.6%</td>
<td>No 52.4%</td>
</tr>
</tbody>
</table>

21. Students touch a wet finish or damage the surface of another student's project.

<table>
<thead>
<tr>
<th>Frequent*</th>
<th>Bothersome*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes 16.7%</td>
<td>No 82.8%</td>
</tr>
<tr>
<td>Yes 51.1%</td>
<td>No 48.9%</td>
</tr>
</tbody>
</table>

22. Students loaf or waste time by bothering others in the laboratory.

<table>
<thead>
<tr>
<th>Frequent</th>
<th>Bothersome*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes 57.1%</td>
<td>No 42.9%</td>
</tr>
<tr>
<td>Yes 75.1%</td>
<td>No 24.9%</td>
</tr>
</tbody>
</table>

23. Arguing and hostility are displayed relating to a grading mark or evaluation.

<table>
<thead>
<tr>
<th>Frequent*</th>
<th>Bothersome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes 5.2%</td>
<td>No 94.8%</td>
</tr>
<tr>
<td>Yes 17.2%</td>
<td>No 82.8%</td>
</tr>
</tbody>
</table>

24. Students whistle or make other noises which are heard in the classroom or laboratory.

<table>
<thead>
<tr>
<th>Frequent</th>
<th>Bothersome*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes 16.3%</td>
<td>No 83.7%</td>
</tr>
<tr>
<td>Yes 33.5%</td>
<td>No 66.5%</td>
</tr>
</tbody>
</table>

25. Students shout to each other above machine noise.

<table>
<thead>
<tr>
<th>Frequent*</th>
<th>Bothersome*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes 33.9%</td>
<td>No 65.2%</td>
</tr>
<tr>
<td>Yes 26.6%</td>
<td>No 73.0%</td>
</tr>
</tbody>
</table>

26. Students fail to listen during lectures, discussions, and demonstrations.

<table>
<thead>
<tr>
<th>Frequent</th>
<th>Bothersome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes 57.1%</td>
<td>No 42.9%</td>
</tr>
<tr>
<td>Yes 76.8%</td>
<td>No 23.2%</td>
</tr>
</tbody>
</table>
27. The substitute teacher is unable to control the group which results in student problems when you return.

<table>
<thead>
<tr>
<th></th>
<th>Frequent*</th>
<th>Bothersome*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>20.2%</td>
<td>79.0%</td>
</tr>
<tr>
<td>No</td>
<td>79.0%</td>
<td>20.2%</td>
</tr>
</tbody>
</table>

28. A student is caught cheating on an exam or quiz.

<table>
<thead>
<tr>
<th></th>
<th>Frequent</th>
<th>Bothersome*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>13.3%</td>
<td>86.7%</td>
</tr>
<tr>
<td>No</td>
<td>86.7%</td>
<td>13.3%</td>
</tr>
</tbody>
</table>

29. Student fighting occurs involving the physical exchange of fists.

<table>
<thead>
<tr>
<th></th>
<th>Frequent*</th>
<th>Bothersome*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>2.6%</td>
<td>96.6%</td>
</tr>
<tr>
<td>No</td>
<td>96.6%</td>
<td>2.6%</td>
</tr>
</tbody>
</table>

30. Students borrow the instructor's set of laboratory keys and fail to return them.

<table>
<thead>
<tr>
<th></th>
<th>Frequent*</th>
<th>Bothersome*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>4.3%</td>
<td>95.7%</td>
</tr>
<tr>
<td>No</td>
<td>95.7%</td>
<td>4.3%</td>
</tr>
</tbody>
</table>

31. Students "sneak out" or leave the laboratory or classroom without permission.

<table>
<thead>
<tr>
<th></th>
<th>Frequent</th>
<th>Bothersome*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>23.6%</td>
<td>76.4%</td>
</tr>
<tr>
<td>No</td>
<td>76.4%</td>
<td>23.6%</td>
</tr>
</tbody>
</table>

32. Smoking occurs in certain parts of the laboratory or laboratory restrooms.

<table>
<thead>
<tr>
<th></th>
<th>Frequent</th>
<th>Bothersome*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>5.6%</td>
<td>94.4%</td>
</tr>
<tr>
<td>No</td>
<td>94.4%</td>
<td>5.6%</td>
</tr>
</tbody>
</table>

33. Students try to construct illegal weapons or articles such as zip guns, brass knuckles, lead billy clubs, etc.

<table>
<thead>
<tr>
<th></th>
<th>Frequent</th>
<th>Bothersome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>3.9%</td>
<td>96.1%</td>
</tr>
<tr>
<td>No</td>
<td>96.1%</td>
<td>3.9%</td>
</tr>
</tbody>
</table>

34. Students shoot compressed air at other students or misuse compressed air.

<table>
<thead>
<tr>
<th></th>
<th>Frequent</th>
<th>Bothersome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>12.0%</td>
<td>88.0%</td>
</tr>
<tr>
<td>No</td>
<td>88.0%</td>
<td>12.0%</td>
</tr>
</tbody>
</table>

35. Students steal projects of components of projects from the laboratory.

<table>
<thead>
<tr>
<th></th>
<th>Frequent*</th>
<th>Bothersome*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>21.0%</td>
<td>75.5%</td>
</tr>
<tr>
<td>No</td>
<td>75.5%</td>
<td>21.0%</td>
</tr>
</tbody>
</table>
36. Students steal material from the laboratory.

<table>
<thead>
<tr>
<th></th>
<th>Frequent*</th>
<th>Bothersome*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>21.9%</td>
<td>56.2%</td>
</tr>
<tr>
<td>No</td>
<td>76.4%</td>
<td>42.5%</td>
</tr>
</tbody>
</table>

37. Students "tinker" and adjust machines, etc.

<table>
<thead>
<tr>
<th></th>
<th>Frequent*</th>
<th>Bothersome*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>26.6%</td>
<td>53.2%</td>
</tr>
<tr>
<td>No</td>
<td>71.2%</td>
<td>45.5%</td>
</tr>
</tbody>
</table>

38. Students abuse and waste materials.

<table>
<thead>
<tr>
<th></th>
<th>Frequent*</th>
<th>Bothersome*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>47.6%</td>
<td>70.0%</td>
</tr>
<tr>
<td>No</td>
<td>51.5%</td>
<td>29.6%</td>
</tr>
</tbody>
</table>

39. Students complete laboratory work, but with little regard to the quality of the assignment.

<table>
<thead>
<tr>
<th></th>
<th>Frequent*</th>
<th>Bothersome*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>47.6%</td>
<td>65.2%</td>
</tr>
<tr>
<td>No</td>
<td>50.6%</td>
<td>32.6%</td>
</tr>
</tbody>
</table>

NOTE: Twenty-five checklist statements contained percentages which do not total 100% because the industrial arts teachers failed to respond.

*Missing Frequent or Bothersome less than 2.1 percent.

The following formula for the standard error of the percentage was used (Kolstoe, 1969, p. 139).

\[
Sp = \sqrt{\frac{PQ}{N}}
\]

For example, the standard error for Statement 39 was .04 for the frequent response and .03 for the bothersome response.
APPENDIX O

MEAN SCORES AND STANDARD DEVIATIONS FOR
IALPS ATTITUDE INVENTORY
MEAN SCORES AND STANDARD DEVIATIONS
FOR IALPS ATTITUDE INVENTORY

N = 49

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I would like to view and respond to additional simulated student disruptive behavior incidents.</td>
<td>3.77</td>
<td>.96</td>
</tr>
<tr>
<td>2. The material presented was helpful to me as a future teacher.</td>
<td>3.89</td>
<td>.68</td>
</tr>
<tr>
<td>3. The incidents were too specific.</td>
<td>3.44</td>
<td>.91</td>
</tr>
<tr>
<td>4. The material presented will help me to solve discipline problems in an industrial arts laboratory.</td>
<td>3.44</td>
<td>.81</td>
</tr>
<tr>
<td>5. While viewing these simulations I almost felt that the students were my students.</td>
<td>2.81</td>
<td>.99</td>
</tr>
<tr>
<td>6. In view of the time allowed for participation I felt that too many incidents were presented.</td>
<td>3.73</td>
<td>.70</td>
</tr>
<tr>
<td>7. I became easily discouraged with the video tape incidents.</td>
<td>3.89</td>
<td>.58</td>
</tr>
<tr>
<td>8. I was not sure how much decision making I did while viewing this material.</td>
<td>3.04</td>
<td>.93</td>
</tr>
<tr>
<td>9. There were too many distractions when viewing this material.</td>
<td>3.95</td>
<td>.78</td>
</tr>
<tr>
<td>10. The material which I viewed will help me when I teach a laboratory class.</td>
<td>3.53</td>
<td>.76</td>
</tr>
<tr>
<td>11. These simulation materials did not seem any more valuable than talking about discipline problems in class.</td>
<td>3.65</td>
<td>.92</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>------</td>
</tr>
<tr>
<td>12.</td>
<td>I felt that I wanted to do my best when identifying the problem and deciding on a course of action.</td>
<td>4.10</td>
</tr>
<tr>
<td>13.</td>
<td>This material has increased my ability to respond to student disruptive behavior problems.</td>
<td>3.51</td>
</tr>
<tr>
<td>14.</td>
<td>I had difficulty viewing the television receiver or set.</td>
<td>3.81</td>
</tr>
<tr>
<td>15.</td>
<td>I felt frustrated by the video tape materials.</td>
<td>3.91</td>
</tr>
<tr>
<td>16.</td>
<td>This is a poor way for me to experience student disruptive behavior problems.</td>
<td>3.83</td>
</tr>
<tr>
<td>17.</td>
<td>I am interested in trying to find out more about discipline problems.</td>
<td>4.14</td>
</tr>
<tr>
<td>18.</td>
<td>While taking this instruction I felt like I was the industrial arts teacher.</td>
<td>3.28</td>
</tr>
<tr>
<td>19.</td>
<td>I felt uncertain as to my performance in identifying the disruptive behavior problem.</td>
<td>3.30</td>
</tr>
<tr>
<td>20.</td>
<td>There was adequate time to list my decisions.</td>
<td>3.77</td>
</tr>
<tr>
<td>21.</td>
<td>I felt uncertain as to my performance in decision making.</td>
<td>3.10</td>
</tr>
<tr>
<td>22.</td>
<td>The incidents presented were too difficult for me.</td>
<td>4.00</td>
</tr>
<tr>
<td>23.</td>
<td>This was a very good way to study student disruptive behavior problems.</td>
<td>3.46</td>
</tr>
</tbody>
</table>
24. I felt very uneasy while viewing the incidents.  
   Mean: 3.93  Standard Deviation: .68

25. Participating in this activity was a poor use of my time.  
   Mean: 4.02  Standard Deviation: .82

26. I like the way the incidents were presented.  
   Mean: 3.16  Standard Deviation: .94

The standard error of the mean was obtained by using the formula:

$$ SE_{\bar{x}} = \frac{S.D.}{\sqrt{N - 1}} $$

For example, the value for the standard error of the mean for Statement 26 is .135.
BIBLIOGRAPHY
BIBLIOGRAPHY


Ambrose, W. L. Discipline in the shop. Industrial Arts and Vocational Education, 1973, 42 (5), 176-51A.


Divoky, D. You are not alone Ms. Niensted but . . . Phi Delta Kappan, 1979, 60 (8), 577-578.


Heyman, Mark. *Simulation games for the classroom.* Bloomington, Indiana: Phi Delta Kappa Educational Foundation, 1975. (Fastback series #54)


Maccia, E. S., Maccia, G. S., and Jewett, R. *Construction of educational theory models.* Columbus, Ohio: The Ohio State University Research Foundation, 1963.


Orcutt, H. The teacher's manual: containing a treatise upon the discipline of the school and other papers upon the teacher's qualifications and work. Boston: Thompson, Bigelow and Brown, 1871.


Svendson, C. R. Effective personnel control practices employed by industrial arts teachers in the secondary school classrooms of the metropolitan areas of Colorado. (Doctoral dissertation, University of Northern Colorado, 1970.) *Dissertation Abstracts*


Wesley, D. A. Classroom control should be a vital part of teacher education. *The Clearing House*, 1971, 45 (6), 346-349.
