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STRATEGIES TO MANAGE PROBLEM BEHAVIORS.

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Dr. Alan I. Sugawara

Managing children with problem behaviors is a challenging task for new teachers. Preservice training offers one means of better preparing new teachers to meet this challenge. Before suggesting alterations in preservice training programs, it is necessary to understand how preservice teachers perceive and respond to problem behaviors. Of particular interest are the factors that lead preservice teachers to choose different strategies of managing problem behavior.

This study used a model incorporating the perceptions and responses of teacher tolerance, attributions as to the causes of problem behavior, costs or adverse effects of problem behavior, and choice of a helping strategy and a restrictive strategy to manage the problem behavior. Subjects' responses to these factors were assessed after they read vignettes depicting an "acting out" or socially defiant child and a "withdrawn" or socially immature child.

The sample consisted of 152 preservice teachers at three levels of their training program. A series of students' t-tests, a multivariate analysis of variance, and a series of multiple regression analyses were used to analyze the data.

The results indicated that social defiance and social immaturity behaviors were attributed to causes that were internal, controllable, and unstable. A helping strategy was more likely to be chosen to manage both types of behavior. When compared to social immaturity behaviors, social defiance behaviors were seen as being less tolerable, more controllable by the child, more costly, and more likely to be managed by a restrictive strategy. The costs of problem behavior were the best predictors of the type of strategy chosen to manage the problem behavior. Preparing preservice teachers to manage these costs was the main implication for teacher training programs. Limitations in the instruments and overall design were discussed along with suggestions for further research.

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Bruce Cunningham

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Professor of Human Development and Family Studies in charge of major

Redacted for Privacy

Head of the Department of Human Development and Family Studies

Redacted for Privacy

Dean of the Graduate School

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Prepared by Bruce Cunningham

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FACTORS CONTRIBUTING TO PRESERVICE TEACHERS' CHOICE OF
STRATEGIES TO MANAGE PROBLEM BEHAVIORS

INTRODUCTION

New teachers face many challenges in their first year of teaching. One particularly difficult challenge involves managing children with problem behaviors. Preservice training offers one means of better preparing new teachers to meet this challenge. Before suggesting alterations in teacher training programs, however, it is necessary to understand how preservice teachers perceive and respond to problem behaviors. In particular, it is important to examine the factors that lead preservice teachers to choose different strategies to manage problem behaviors.

The main purpose of this study is to gain a better understanding of the decision process preservice teachers use in choosing a strategy to manage problem behaviors. By identifying the contribution of factors relevant to this decision process, it is hoped that implications for preservice teacher training will become apparent. After a more detailed discussion of behavior management strategies and their effects on children, a general model will be presented that incorporates several factors that contribute to the choice of a behavior management strategy.

A number of strategies are readily available to help classroom teachers manage problem behaviors. Algozzine (1985), for example

provides a thorough and practical discussion of many different techniques and methods. On a more informal level, teacher responses to problem behaviors can be conceptualized as being either helping or restrictive. Helping strategies involve techniques that are based on an understanding of the child's behavior and empathetic teacher involvement. Restrictive strategies, however, involve techniques that are punishing in nature, or are meant to suppress the child's behavior.

There is some indication in the literature that inexperienced teachers tend to choose restrictive strategies in managing problem behaviors. Moore and Cooper (1984) examined teacher responses to hypothetical examples of problem behaviors. The four types of behaviors examined were schoolwork related problems, difficulties in relationships with peers, difficulties in teacher-child relations, and undifferentiated antisocial behavior. Teachers with high levels of education and experience were less likely to report examples of such behaviors as being a problem. Teachers with lower levels of education and experience were more likely to suggest using restrictive and reprimanding disciplinary strategies to deal with such behaviors. These strategies included techniques such as within school suspension, restriction from certain activities, verbal reprimands, and corporal punishment.

Among preservice teachers, Elliott, Witt, Galvin, and Peterson (1984) found a general tendency to match the type of management strategy to the severity of child behavior. For more severe problem behaviors, such as using obscene language and destroying other

children's property, these preservice teachers indicated they would rely on strategies described as reductive. These reductive strategies included techniques such as seclusion and time-out.

The tendency for preservice and beginning teachers to choose restrictive strategies in managing problem behavior may be due to the training they received. In extensive interviews, Applegate (1985) found that new teachers consistently reported feeling unprepared to deal with problem behaviors in the classroom. This finding was described as a recurring dilemma in teacher training. It suggests that new teachers may choose restrictive strategies due to inadequate training.

Unfortunately, these restrictive strategies may have implications for children that go beyond the immediate problem behavior. The idea that a teacher's expectations can influence a child's achievement has been of great interest to educators. Rosenthal and Jacobson (1968) first applied the concept of the self-fulfilling prophecy, or the Pygmalion effect, to the classroom. Simply stated, high teacher expectations are believed to increase a child's level of achievement, while low teacher expectations are thought to depress such achievement.

While the mechanics and limitations of teacher expectations have been debated, it is generally agreed that such effects probably do exist for some teachers and some children. In a recent and extensive review of research on the self-fulfilling prophecy, Brophy (1983) affirms this position and raises several additional considerations. Foremost among these considerations is that the

concept of teacher expectations should be expanded to include teachers' beliefs and attitudes toward children. Another suggestion is that the impact of self-fulfilling prophecies on areas other than achievement be investigated.

For managing problem behavior, this body of research implies that restrictive strategies may have an undesirable effect on a child's development. Helping strategies may have a neutral or more positive effect. Therefore, it may be more desirable to move teachers, particularly preservice teachers, toward choosing helping strategies. An initial step towards this goal is to identify the factors that influence preservice teachers to choose helping or restrictive strategies.

A general model that incorporates several such factors has been proposed by Carroll and Payne (1977). These factors include specific information about the behavior, general knowledge or beliefs about that type of behavior, and opinions or impressions as to the cause or causes of the behavior. This model was illustrated by applying it to the parole decision process.

In an exploratory study, Brophy and Rohrkemper (1981) adapted this model to examine teachers' choices of strategies to manage problem behaviors in the classroom. The factors influencing the eventual choice of a strategy were proposed to include teachers' perceptions of the problem behavior as determined by beliefs and knowledge of that behavior, opinions or impressions as to the cause or causes of the child's behavior as well as the teachers' own behavior, cognitive and affective reactions to these attributed

causes of behavior, and a cost/decision analysis.

The current study uses this general model to identify the relative contribution of factors that lead preservice teachers to help or restrict problem behavior children. By identifying these factors it is hoped that implications for improving teacher training will become apparent. The eventual goal of improved teacher training is to help new teachers choose helping strategies to manage children with problem behaviors. This, in turn, would reduce the undesirable effects that restrictive strategies may have on children.

REVIEW OF LITERATURE

Support for the individual items in the models of Carroll and Payne (1977) and Brophy and Rohrkemper (1981) can be found throughout the research literature on education. Starting with different types of problem behaviors, the factors of teacher tolerances for problem behaviors, teacher attributions as to the causes of those behaviors, and the adverse effects or costs of problem behaviors in the classroom are discussed. This discussion also focuses on the proposed relationships of these factors to the choice of helping and restrictive strategies. Finally, a more detailed treatment of helping and restrictive strategies, and a summary conclude this section.

Problem Behaviors.

Traditionally, problem behaviors are thought to result from some disturbed condition that is internal to the child. Numerous checklists have been developed to identify the frequency and different types of problem behaviors. These checklists are generally normed on large samples of children and constitute a much used diagnostic technique (Olsen, 1981; Kelker, 1981). One such instrument is the Behavior Problem Checklist (Quay and Peterson, 1975; Quay, 1983). Like other checklists, this instrument has been factor analyzed to reveal several clusters or types of problem behavior. These types include conduct disorders, socialized

aggression, attention problems-immaturity, anxiety-withdrawal, psychotic behaviors, and motor excess. The items that make up these types include no mention of the way in which these behaviors are perceived in the classroom environment.

An alternative approach to conceptualizing problem behaviors suggests that a disturbed condition within the child should not be the sole focus. From this viewpoint, a problem arises when there is an adverse interaction between a child's behavior and the environment or other people.

To investigate this idea, Algozzine (1977) had a large sample of teachers and university students complete the Behavior Problem Checklist. Rather than rating a particular child, the instructions were modified so that teachers were rating how disturbing the various behaviors were to them. A factor analysis of these responses revealed four types of behavior that were disturbing to teachers. They were labeled social immaturity, social defiance, motorically disturbing, and socialized delinquency. Social immaturity included behaviors such as being shy, withdrawn, and anxious. Social defiance consisted of destructive, aggressive, and disobedient behaviors. Motorically disturbing included acting hyperactive, and socialized delinquency consisted of such behaviors as truancy and staying out late at night. While similar to the clusters of behaviors on the Behavior Problem Checklist, these factors are thought to represent a different construct.

This distinction between regarding the child as disturbing rather than being disturbed has important implications for

strategies to manage problem behavior. Strategies assuming the child to be disturbed focus on changing the child through the use of restrictive methods. Teachers are largely exempt from any responsibility for causing or contributing to the problem behavior. However, alternative strategies regarding the child to be disturbing rather than disturbed, focus on reducing the problem behaviors by making changes in the environment, or in people dealing with the child. When compared to the traditional approach, these strategies would include helping strategies.

In an effort similar to Algozzine (1977), Hutton (1984) had teachers indicate the degree to which they were "disturbed by" or "concerned about" problem behaviors. The behavioral items came from the Teacher Checklist of School Behavior. Disturbing ratings were conceptualized as being emotional reactions to problem behavior. They were interpreted as indicating that a child, a teacher, and an environment were in need of an appropriate intervention strategy. Concern ratings were seen as indicating a more professional response to problem behavior. It was found that aggressive behaviors were seen as being the most disturbing. Peer avoidance was found to be the type of behavior of least concern. The conclusion drawn from this study was that behaviors arousing a high degree of disturbing ratings are likely to be countered with a strategy that is emotional in nature. Behaviors arousing teacher concern were thought more likely to be managed with professional strategies.

To summarize this discussion on problem behaviors, it appears that disturbing behaviors tend to be responded to with emotional and

restrictive strategies. Recognizing these behaviors as being disturbing rather than coming from a disturbed child may be a way of encouraging the use of strategies that are more professional and helping in nature.

Teacher Tolerance of Problem Behaviors.

General attitudes and beliefs are important factors in strategy decision models. They have also received considerable attention in the literature.

Willis and Brophy (1974), for example, confirmed and advanced the findings on teacher attitudes toward school children. Four attitudes specifically discussed were attachment, rejection, concern, and indifference. Of particular interest here, are the attitudes of rejection and concern. Rejection of a child was assumed to exist when a teacher nominated that child to be removed from the class in response to a hypothetical question. Concern about a child was noted if a teacher indicated they would like to spend all their time working with a child whose development concerned them a great deal. The behavior of the children eliciting these types of attitudes did not entirely conform to the image of a model child who readily experiences general school success. Specifically, children who were rejected were found to be less conforming to school routines, and to misbehave. Children who concerned teachers appeared to conform well to general school expectations but were low achievers.

An extensive study on teacher-child interactions (Brophy and Evertson, 1981) provided further information on teacher attitudes.

Among other aspects, the responses of teachers toward children who elicit the attitudes of rejection and concern were examined. Children chosen as rejected were found to be called on less often in class and to have briefer interactions with teachers. These children also received more reprimands than other children. Children chosen as concerned had longer interactions with teachers and were given more second chances to answer questions in class. These children also received more encouragement from their teachers.

A construct similar to the attitudes of rejection and concern is that of teacher tolerance. Low tolerance is seen as indicating rejection, while high tolerance is believed to reflect concern about a child. Several studies indicate that teacher tolerance may influence strategies of managing problem behaviors in a way similar to that of attitudes.

In an initial investigation of teacher tolerance, Algozzine and Curran (1979) had teachers predict the general school success of hypothetical students exhibiting either socially immature or socially defiant behaviors. Teachers also indicated their levels of tolerance toward these behaviors. It was found that higher tolerances for socially immature behaviors were positively correlated with predictions of school success. The level of tolerance did not appear to affect the predictions of school success for socially defiant children.

In an extension of this research, Algozzine, Ysseldyke, and Christenson (1983) also found high tolerance to lead to high expectations for children with immature behaviors. Expectations

consisted of the extent to which teachers thought the children had a learning problem, a behavioral problem, or were eligible for special education. For children with defiant behaviors, tolerance had little effect on teacher expectations.

In another study of this construct, Safran and Safran (1984) developed a scale to measure teacher tolerances of certain behaviors. This tolerance scale was derived from the Devereux Elementary School Rating Scale (DESB II) (Swift, 1982). The DESB II is similar to the Behavior Problem Checklist discussed earlier, and has been factor analyzed, revealing various clusters or types of behaviors. Teachers were asked to indicate how tolerable they found each of the behavioral items on the DESB II. It was found that outer-directed or aggressive behaviors are least tolerated by teachers. Inner-directed behaviors, such as failure anxiety, were found to be more tolerated.

To summarize these investigations on teacher tolerance, it appears that tolerance is an important variable in influencing the choice of helping or restrictive strategies. The literature suggests that greater teacher tolerance for inner-directed problem behaviors leads to more choices of helping strategies. Teacher tolerances appear to have less influence on strategies chosen to manage outer-directed problem behaviors. Many of a teacher's basic beliefs and attitudes are formed during their training programs. Encouraging preservice teachers to be more tolerant of problem behaviors may influence them to choose helping strategies.

Causal Attributions.

A central part of the proposed model involves the opinions or impressions preservice teachers have about the cause or causes of problem behavior. These are termed causal attributions. Simply stated, the reasons a teacher gives for a child's behavior will affect that teacher's response to that child. Attributional theory has been widely used to study helping behavior in the field of social psychology. It has also been applied to classroom settings. After an overview of attributional theory, its application to teacher-child interactions is discussed.

The beginnings of attributional theory are frequently traced to Heider (1958). More recently it has been Weiner (1972, 1976, 1979) who has consistently expanded and refined attributional theory. In its most complete formulation to date, Weiner (1979) has proposed five dimensions along which attributions are made. These include locus of causality, stability, controllability, intentionality, and globality. While Weiner (1979) makes a good case for utilizing, and differentiating between all five dimensions, it is the first three that are best established and most commonly used. They are the dimensions used in the present study.

Attributions involving locus of causality vary along the dimension of internality and externality. An internal attribution indicated the cause of behavior is believed to lie within a person. The cause of hyperactivity, for example, is often thought to be due to some organic, or internal cause. Attributions to external causes indicate that a behavior is believed to result from some aspect of

the situation. A child who is overly active in the classroom, for example, may be believed to be responding to a very distracting and disruptive environment, which is an external cause. Therefore, different people may make different attributions as to the causes of the same kind of behavior. Weiner (1979) proposed that the perceived locus of causality influences value judgments of, or feelings toward other people. Thus, a teacher is likely to respond in a more positive and helping manner if it is believed a child's behavior is due to an external cause. For internal causal attributions of a child's behavior, teachers may respond in a more restrictive manner.

Another dimension of causal attributions involves controllability, or whether a person can control their own behavior. For example, teachers generally attribute a child's typical effort to causes that are within the child's control. A child's ability, on the other hand, is generally attributed to causes that are uncontrollable, or beyond the control of the child. Attributions regarding controllability are believed to influence interpersonal judgments that affect a person's decision to help another person. Children who are believed to be able to control their behavior, but fail to do so, are less likely to be helped by their teachers. Restrictive strategies are likely to be used with these children. Children experiencing problem behaviors due to causes believed to be beyond their control are more likely to be helped by teachers.

Stability comprises another dimension of causal attributions. Behavior attributed to stable causes is believed to be permanent and

unchanging. Behavior that is seen as unstable is thought to be more temporary or variable over time. Weiner (1979) proposed that stability influences the expectancy of change in another person's behavior as well as the resulting need for action. For example, attributions of stability are likely to lead teachers to adopt strategies that are restrictive in nature. Disturbing behavior that is not believed likely to change may be suppressed. Problem behavior seen as unstable may result in strategies designed to help the child overcome their temporary lapses in acceptable behavior.

These three dimensions of causal attributions were used by Carroll and Payne (1977) in investigating factors leading to parole decisions. It was found that parole was most readily granted when the attributions for the criminal behavior were external, uncontrollable, and unstable. Parole was least likely to be granted for criminal behavior that was attributed to internal, controllable, and stable, causes. These patterns of attributions represented the most extreme possibilities for influencing the parole decision. Other possibilities resulted in mixed, or less clear cut parole decisions. Overall, however, these results supported the types of responses that attributional theory predicts.

In applying this attributional theory to problem behaviors in the classroom, Brophy and Rohrkemper (1981) obtained similar results. Teachers attributed the cause of aggressive and defiant problem behaviors to internal, controllable, and stable sources. Consequently, teachers indicated they would respond with restrictive types of strategies. These included a reliance on punishment,

threats, and pressuring behavior, as well as the use of restricted goals. For problem behavior such as shyness, social withdrawal, and anxiety, teachers revealed a different pattern of causal attributions. The causes of these behaviors were seen as being less clearly internal or external, and less clearly controllable by the child. Altogether, the teachers mentioned multiple possibilities for these dimensions when discussing the causes of shy and withdrawn behavior. These behaviors were, however, seen as being stable. Consequently, the teachers indicated they would respond with strategies that included a mix of helping and restrictive techniques. These included using both rewards and punishments, and ongoing adjustments in the types of techniques and methods employed.

Therefore, the pattern of causal attributions appears to have an effect on the type of response teachers make to children with problem behaviors. A better understanding of the causal attributions that preservice teachers make may provide implications for intervention in their training. For example, training students to more readily see the causes of common problem behavior as external, uncontrollable, and unstable may lead them to adopt strategies that are more helping in nature.

Adverse Effects or Costs of Problem Behavior.

Problem behaviors have a number of adverse effects in the classroom. These effects, or costs, may range from placing extra demands on the teacher's time, to distracting other children who are trying to learn, to interfering with the development of the child who is exhibiting the problem behavior. Different types of problem

behavior appear to have different kinds or combinations of costs. It is likely that the constraints and trade-offs these costs present to the teacher, influence the selection of a strategy to manage the problem behavior. The adverse effects of problem behavior will be discussed in terms of costs to the teacher, costs to the class, and costs to the student exhibiting the problem behavior.

In a content analysis of teacher interviews, Brophy and Rohrkemper (1981) identified a number of costs that problem behaviors present to teachers. Frequently mentioned were the time, energy, and emotional involvement required in managing problem behavior. Safran and Safran (1985) made a similar finding for disruptive behaviors, such as negative aggression. These types of behavior were seen as undermining or frustrating feelings of teacher competence, personal control, and self-efficacy. Other costs that involve personal and professional needs, such as status, may include administrative and parental pressures to effectively manage problem behaviors.

Gordon (1974) has proposed a way of thinking about behavior based on this kind of needs frustration. According to this scheme, a teacher is said to "own" the problem when a child's behavior frustrates the needs or desires of that teacher. Conversely, when the teacher acts in such a way as to frustrate the desires of the child, then it is the child who owns the problem. Shared problem ownership results when the needs of both teacher and child are frustrated. Brophy and Rohrkemper (1981) used this construct as a means of classifying different types of problem behavior. While

this means of classification is commonly used, it may not be particularly reliable. For example, as soon as a frustrated teacher uses some technique to manage a child's behavior, it is likely that the problem ownership will suddenly shift from the teacher to the child. Due to this fluid aspect of problem ownership, the concept of frustrated desires will be treated here as a cost of problem behavior.

Another cost to the whole class involves loss of learning time. Specifically, the time demanded in managing problem behaviors of one or a few children reduces the time that a teacher may spend instructing the whole class. For particularly destructive types of behavior, instructional materials or the personal property of other children may be damaged.

While this discussion has focused on the problem behavior child as the source of costs, the child exhibiting the problem behaviors may also be subject to adverse effects of their own behavior. Brophy and Rohrkemper (1981) note that a child's problem behaviors may interfere with their own present or future learning. This may also occur in the social, emotional, or physical areas of development.

It is readily apparent that the costs of outer-directed, or very disruptive types of behavior affect the teacher and the class. In the face of such high personal costs, teachers may respond with a restrictive strategy. The adverse effects that the disruptive behavior has on the child who is being disruptive may be overlooked.

The costs of inner-directed, or withdrawn behaviors, only tend

to affect the child exhibiting them. The lack of overt personal costs may lead teachers to use helping strategies with these children. Understanding how preservice teachers view the costs of problem behavior may have several implications. One would involve making these teachers more aware of how problem behaviors have an adverse effect on the child who is exhibiting them. This may lead preservice teachers to more readily adopt helping strategies.

Helping and Restrictive Strategies.

Throughout the previous sections, strategies for managing children's problem behaviors have been referred to as being restrictive or helping. This section elaborates on specific techniques and methods that are considered to represent these two types of strategies. The goals of the strategies, and the implications of their use with children, are also discussed.

Helping strategies are characterized by methods that rely on active and empathetic teacher involvement. These methods include understanding the child through active listening, and providing nurturance and support. Helping strategies may involve the teacher seeking out new methods from resource teachers, colleagues, or professional journals. As a result, a teacher may modify their usual teaching approach and experiment with new or different techniques in working with the problem behavior child.

The ultimate goal of a helping strategy is to allow a child to control their own behavior. This is accomplished by responding to the causes rather than the results of problem behavior. Helping strategies embody the most ideal and professional methods in

managing problem behaviors in the classroom. In addition to managing the problem behavior, helping strategies seek to help the child develop into a more competent human being.

Restrictive strategies are characterized by their punitive and controlling nature. These methods include using verbal reprimands such as lectures, threats, and other pressuring behavior. Where it is allowed, corporal punishment may also be used. Restrictions that seek to punish the child, such as denying participation in pleasurable activities, isolation from the rest of the class, or removal from the classroom, are other restrictive methods.

The goals of restrictive strategies are to reduce the occurrence of the problem behavior by imposing external control or undesirable consequences. Another goal or result of these methods is to create distance, or limit interaction between the teacher and the problem behavior child.

While restrictive strategies may succeed in suppressing the problem behavior, they may also have undesirable side effects on children. The possibility that restrictive techniques of managing problem behavior communicate low teacher expectations clearly exists. The use of these methods may not only affect a child's achievement, but may carry over into areas of self-concept and social skills as well.

As Hutton (1984) indicated, restrictive teacher responses to problem behavior are more emotional than professional in nature. Elliott et al. (1984) suggests that reliance on these types of techniques may be due to a lack of knowledge, experience, skill,

time, and material or personnel resources. Preservice training cannot address all of these items. However, it may be possible to provide experiences that increase preservice teachers' knowledge, experience, and skill in using helping strategies.

Summary.

In conclusion, moving teachers toward choosing helping strategies to manage problem behaviors appears to be a desirable goal. Helping strategies constitute a professional rather than an emotional response to problem behaviors. These techniques also avoid the undesirable side effects on children that restrictive strategies may produce.

There appears to be a particular need for moving preservice teachers toward choosing helping strategies. These students have a tendency to choose more restrictive strategies in managing problem behavior. An initial step in reducing preservice teachers' reliance on restrictive strategies involves gaining a better understanding of the decision process these teachers use in choosing a strategy to manage problem behavior.

To this end, a model that includes several factors believed to be relevant to this decision process has been proposed. These factors include different types of behavior that have been found to disturb teachers, tolerance for different types of problem behavior, teacher attributions as to the causes of those behaviors, and costs or adverse effects that the problem behaviors may have on the teacher, the rest of the class, as well as the child who is exhibiting the problem behavior.

Determining the key factors, or combinations of factors that best account for or heavily contribute to, the decision to help or restrict the problem behavior child is the main focus of this study. Exploring the responses of preservice teachers to different types of problem behavior, as well as comparing the responses between types of problem behavior, may help to interpret the decision process. Through this approach it is believed that implications for training preservice teachers to choose helping strategies will become apparent.

METHOD

The presentation of methodology begins with a description of the subjects and is followed by a discussion of the instruments. The administration of the instruments to the subjects and the statistical procedures used in analyzing the data are then discussed.

Subjects.

The subjects consisted of 152 students enrolled in education courses at the Oregon State University - Western Oregon State College School of Education. These courses consisted of two sections of Ed 199N Math for Elementary School Teachers, two sections of Ed 309 Theory and Practicum II, and Ed 367 Theory and Practicum/Elementary.

Of these 152 subjects, 74% were female and 26% were male. The mean age of the subjects was 22.57 years. A breakdown of class standing showed that 15% were freshmen, 38% were sophomores, 26% were juniors, 15% were seniors, and 6% described themselves by marking the category labeled "other". The mean grade point average of the subjects was 2.94. A more detailed description of the demographic data can be found in Table 1.

Three levels of teacher training were identified by examining the subjects' descriptions of their experiences working with children over the past three years. These experiences included

Table 1
Description of Subjects

	Total Sample		TTL I		TTL II		TTL III	
	n	%	n	%	n	%	n	%
Gender								
Female	113	74	31	91	47	59	35	92
Male	39	26	3	9	33	41	3	8
Age								
Mean:	22.57 years		20.66 years		22.88 years		23.83 years	
Class Standing								
Freshmen	23	15	23	68	0	0	0	0
Sophomores	58	38	7	21	48	60	3	8
Juniors	39	26	3	9	18	22	18	47
Seniors	23	15	0	0	7	9	16	42
Other	9	6	1	2	7	9	1	3
Grade Point Average								
Mean:	2.94		2.86		2.94		3.19	

requirements related to the subjects' training programs and experiences unrelated to their training program. These levels are described below. A more detailed description of the demographic data for each of these levels can also be found in Table 1.

The 34 subjects at Teacher Training Level I (TTL I) were just beginning their training programs. Their academic courses were introductory in nature. They had not undertaken requirements of observing, interacting, or applying their knowledge in organized educational settings. The few practical experiences listed by these subjects usually included babysitting or the part-time care of a younger sibling.

The 80 subjects at Teacher Training Level II (TTL II) were in an intermediate phase of their training program. Their prior academic coursework had been more detailed in nature. This coursework included producing instructional materials and developing and applying basic teaching competencies in education. These subjects had fulfilled a requirement of working in a public school classroom as a Teacher's Aide for 12 hours per week for one academic quarter. This experience included observing, interacting, and supervising children in planned activities. Other practical experiences listed by these subjects typically included coaching sports, giving music lessons, or teaching in a Sunday Bible School.

The 38 subjects at Teacher Training Level III (TTL III) were in an advanced phase of their training program. In addition to the requirements of TTL II subjects, coursework at this level included basic instructional strategies such as skill development and concept

formation. Integrating and applying prior knowledge was also stressed in a practicum. This experience involved working in a public school classroom for 15 to 20 hours a week for one academic quarter. Specifically, subjects tutored individual students, presented lessons to small groups, and made presentations to a whole class. Other practical experiences listed by these subjects typically included a Reading Laboratory Practicum, being a counselor at an Outdoor Camp, and volunteer work in a school classroom or YMCA Summer Program.

Instruments.

Several of the following instruments were constructed to fit the purpose of this study. Others were modified from existing instruments. The process of devising, modifying, and refining these instruments is discussed in this section. Reliability coefficients for the instruments and preliminary factor analyses of the total sample will also be presented here.

Teacher Tolerance Scale. An instrument to measure teacher tolerance was constructed using selected items from the Behavior Problem Checklist (Quay and Peterson, 1975). As discussed earlier, Algozzine (1977) had a large sample of teachers and university students complete the Behavior Problem Checklist. Rather than rating a particular child, the instructions were modified so that teachers were rating how disturbing the various behaviors were to them. A factor analysis of these responses revealed four types of behavior that are disturbing to teachers. They were labeled social immaturity, social defiance, motorically disturbing, and socialized

delinquency.

The behavioral items from the social immaturity and the social defiance clusters of disturbing behavior were used in the Teacher Tolerance Scale. Algozzine (1977) pointed out that the motorically disturbing cluster contained only two items and may not be reliable. The socialized delinquency cluster contained items that are less applicable to the classroom setting. For these reasons the motorically disturbing and socialized delinquency types of behavior were not included in this investigation.

The Teacher Tolerance Scale consisted of 20 social immaturity items and 15 social defiance items. These items are listed in Table 2. In the actual instrument, these items were ordered with the use of a random numbers table. These behavioral items were preceded by a statement noting that teachers find some child behaviors more disturbing or less tolerable, than other child behaviors. Subjects were then asked to indicate how tolerable they would find the following behaviors. A 5-point Likert scale was used to record the subjects responses. Anchors for the ends of the scale were the descriptors, "not at all tolerable" and "tolerable".

A tolerance score for social immaturity behavior was obtained by adding the ratings of the social immaturity items and then dividing this sum by the number of items in the social immaturity section of the scale. This same process was used to obtain a tolerance score for social defiance behaviors. Reliability coefficients for the social defiance and social immaturity subscales can be found in Table 3. The Teacher Tolerance Scale can be found

Table 2
Social Defiance and Social Immaturity Behaviors

Social Defiance	Social Immaturity
Destructiveness	Repetitive speech
Distractibility	Easily flustered
Negativism	Incoherent speech
Irritability	Preoccupation
Impertinence	Doesn't know how to have fun
Inattentiveness	Feelings of inferiority
Fighting	Social withdrawal
Disobedience	Lack of self-confidence
Boisterousness, rowdiness	Nervousness, jitteriness
Uncooperativeness	Drowsiness
Attention seeking	Aloofness
Irresponsibility	Fixed expression
Disruptiveness	Tension, inability to relax
Temper tantrums	Depression, chronic sadness
Laziness in school	Clumsiness
	Passivity, sluggishness
	Shyness, bashfulness
	Hypersensitivity
	Physical complaints
	Anxiety

in Appendix B.

Support for the construct of teacher tolerance comes from a study on teacher perceptions of problem behavior. Safran and Safran (1985) had teachers indicate how tolerable, how severe, and how manageable they found different problem behaviors. Teacher tolerance had an inverse relationship with severity, and a positive relationship with manageability. These findings were in the directions expected by the authors.

Vignettes. A short story-like description, or vignette, was written to reflect the behavioral items of social immaturity. Another vignette was devised to depict the behavioral items of social defiance. These vignettes were behaviorally written. Labels, or the actual items in the Teacher Tolerance Scale, were not used.

The validity of the vignettes depends on the degree to which each vignette depicts the type of behavior it was meant to depict. Three graduate students, who also teach in an Oregon State University Laboratory School, were chosen as independent raters to assess the validity of the vignettes.

Each rater read each vignette and then filled out a checklist for that vignette consisting of the items on the Teacher Tolerance Scale. Items were checked if they were felt to describe the behavior of the child in the vignette. This process resulted in the vignettes being rewritten and rated again. This refinement resulted in the child in the social immaturity vignette being described by only those behavioral items representing that cluster of behavior.

Similarly, only those items in the socially defiant cluster were checked by the raters as describing the behavior of the child in the social defiance vignette.

In writing these vignettes, care was also taken to give no clues about the cause or causes of the behavior. Severity of the descriptions was controlled by including the same number of incidents, or behavioral descriptors, in each vignette. These stories were also personalized by using names for the children. Dusek and Joseph (1983) pointed out that unusual names may influence teacher expectations. Therefore, common and familiar names for the children were chosen.

For male subjects, the child names chosen indicated that the children in both stories were males. For female subjects, the names chosen indicated that the children in both stories were females. This arrangement was devised to control a source of bias that may occur when a subject rates a child of the opposite sex. The two vignettes can be found in Appendix C.

The vignettes were preceded with instructions giving the subjects a frame of reference regarding the classroom setting and situation. Subjects were asked to imagine they are teachers of a regular school classroom. Furthermore, they have just met their class for the first week of a new school year. Some of the children in their class exhibit behaviors that they, as teachers, find disturbing. The subjects were then instructed to read the vignette, referring back to it if necessary, and to respond to the following questions regarding causal attributions, costs, and strategies to

manage problem behavior.

Causal Dimensions Scale. Russell (1982) devised an instrument to measure the degree of causal attributions people make about behavior. This instrument was based on Weiner (1979) and uses the dimensions of locus of causality, controllability, and stability.

The Causal Dimensions Scale consists of 9 bipolar items. Each of these items utilizes a 9-point Likert scale. The result is a nine question scale with each dimension being represented by a three question subscale. Ratings for the items in each subscale are summed to obtain a score for that subscale. Each of the three dimensions was considered as a separate variable.

The locus of causality items assess whether the causes of the problem behavior reflect an aspect of the child or an aspect of the situation, are inside or outside the child, and involve something about the child or something about other people. The controllability items assess whether the causes of the problem behavior are controllable by the child or uncontrollable by the child, intended by the child or unintended by the child, and something for which someone is responsible, or no one is responsible. Finally, the stability items assess whether the causes of the problem behavior are permanent or temporary, stable over time or variable over time, and unchangeable or changeable.

Russell (1982) validated this scale by having a sample of undergraduate psychology students rate sample descriptions of behavior. Each of these descriptions had previously been determined to clearly reflect a causal dimension. Analysis of the ratings

indicated that the scale could identify the dimensions that were reflected in the sample descriptions. The findings also indicated that the scales could discriminate between the dimensions reflected in the sample descriptions. The items on each subscale differentiated only between the sample descriptions reflecting that dimension and not descriptions reflecting the other dimensions. Internal consistency analyses for the subscales indicated alpha coefficients ranging from .73 to .87.

This scale was originally designed for an individual to examine the causal attributions they make about their own behavior. The directions and wording of the items were slightly modified to suit the purpose of the present study. The Likert scale was also changed from nine to seven points. This was done to make the scale more visually consistent with the other instruments. Reliability coefficients for each subscale can be found in Table 3. The modified Causal Dimensions Scale can be found in Appendix D.

The Costs Scale. The various costs of problem behavior were gleaned from Brophy and Rohrkemper (1981), Safran and Safran (1984), colleagues, and personal experience. Three costs to teachers, three costs to the class, three costs to the child exhibiting the problem behavior, and three indirect costs of problem behavior were identified.

Costs to the teacher included the likelihood that the problem behavior would take a lot of the teacher's energy to deal with, make the teacher feel less in control of the classroom, and be emotionally draining to manage. Costs to the class consisted of the

Table 3
Reliability Coefficients for the Measurement Scales

	Cronbachs' Alpha
Teacher Tolerance Scale	
Social Defiance Behaviors	.92
Social Immaturity Behaviors	.91
Causal Dimensions Scale	
Locus of Causality	.55
Controllability	.22
Stability	.81
Costs Scale	
Costs to the Teacher	.66
Costs to the Class	.84
Costs to the Student	.23
Indirect Costs	.73
Strategies Scale	
Choice of a Helping Strategy	.66
Choice of a Restrictive Strategy	.63

likelihood that the problem behavior would hurt other children, keep other children from learning, and be imitated by other children in the class. Costs to the student included the likelihood that the problem behavior would interfere with that child's physical, social, and academic development. Finally, indirect costs consisted of the likelihood that the problem behavior would cause parents to question the teacher's ability to teach, lead other teachers to have less respect for the teacher, and make the principal give the teacher a poor evaluation.

These costs were written as statements. The statements were arranged in a rotating order so that the maximum distance was obtained between items of any one type. Subjects were asked to respond in terms of how likely they felt each statement was regarding the child depicted in the previous vignette. A 5-point Likert scale was used. The anchors consisted of the descriptors, "very likely" and "not at all likely". The Costs Scale can be found in Appendix E.

A factor analysis of the data was performed to determine whether costs to the teacher, class, student, and indirect costs represented different dimensions or were all part of the same dimension. A principal factoring with iteration and varimax rotation was used for the analysis. As a result, four factors emerged. They were costs to the teacher, costs to the class, costs to the problem behavior child, and indirect costs. The factor loadings for each of the items can be found in Table 4 and are discussed below.

Table 4
Factor Loadings for Items of the Costs Scale

	Factor 1	Factor 2	Factor 3	Factor 4
	Costs to the Teacher	Costs to the Class	Costs to the Student	Indirect Costs
Item 1	.72	.21	.09	.04
Item 5	.30	.68	.14	.31
Item 9	.61	.16	.10	.11
Item 2	.15	.79	.09	.08
Item 6	.15	.91	.13	.20
Item 10	.12	.60	-.25	.31
Item 3	-.05	-.27	.05	-.02
Item 7	.04	-.10	.60	.04
Item 11	.10	.07	.46	.03
Item 4	.05	.21	.22	.46
Item 8	.05	.13	-.09	.85
Item 12	.10	.13	.05	.77

As expected, Item 1 and Item 9 loaded highest on the costs to the teacher factor. These items concerned the problem behavior taking a lot of time to deal with and being emotionally draining. Item 5, which concerned the problem behavior making the teacher feel less in control of the classroom, loaded moderately on the costs to the teacher factor. Item 5 loaded highest on the costs to the class factor and also loaded moderately on the indirect costs factor. While these loadings for Item 5 on the costs to class factor and the indirect costs factor were unexpected, prior research and the overall pattern of the factor loadings for Item 5 led the researcher to include this item in the costs to the teacher factor and is discussed below.

First of all, Safran and Safran (1985) found that a major cost of problem behavior involved undermining a teachers' feelings of self control. In the current study, this finding is supported by the moderate loading of Item 5 on the indirect costs factor. That is, the indirect costs items also reflect costs to the teacher. Clearly then, problem behavior does have adverse effects on the teacher. Whether a teacher who feels less in control of the classroom has an adverse effect on the class is less clear. Feelings of control and actual control may not be directly related. With this in mind, Item 5 was included in the costs to the teacher factor.

As expected, Item 2, Item 6, and Item 10 loaded highest on the costs to the class factor. These items concerned the problem behavior hurting other children, keeping other children from

learning, and being imitated by other children in the class. The actual factor loadings for these items on the costs to the class factor ranged from .60 to .91. These items did not load higher than .31 on the other factors.

As expected, Item 7 and Item 11 loaded highest on the costs to the student factor. These items concerned the problem behavior interfering with the students' social and academic development. Item 3, which concerned the problem behavior interfering with the students physical development, had a low loading on the costs to the student factor. The loadings for this item on the other factors, however, were negative. Therefore, Item 3 was included in the costs to the student factor.

Finally, it was expected that Item 4, Item 8, and Item 12, would load highest on the indirect costs factor which was the case. These items concerned the problem behavior: causing parents to question the teacher's ability to teach, leading other teachers to have less respect for the teacher, and making the principal give the teacher a poor evaluation. The actual factor loadings for these items on the indirect costs factor ranged from .46 to .85. These items did not load higher than .22 on the other factors.

To assess reliability, Cronbachs Alpha Coefficients were calculated for each factor or subscale (see Table 3). For the costs to the teacher factor and the cost to the class, these coefficients were .66 and .84 respectively. For the cost to the student factor and the indirect costs factor, these coefficients were .23 and .73 respectively. As a result of the preliminary factor and reliability

analyses, the scores for the three items in each subscale were summed to obtain a costs score for that subscale.

Strategies Scale. Twenty techniques and methods reflecting helping and restrictive strategies were gleaned from Brophy and Rohrkemper (1981), Witt and Martens (1984), Algozzine et al. (1983), and Moore and Cooper (1983). The raters who rated the vignettes were also used to help determine which of these methods and techniques were clearly restrictive or helping.

The raters were provided with a brief description of the helping and restrictive construct of behavioral management strategies. They were then presented with the 20 techniques of managing problem behaviors. The raters were asked to indicate on a 5-point scale whether each technique was "very helping", "helping", "between helping and restrictive", "restrictive", and "very restrictive". Only techniques judged by all the raters to be "very helping" or "helping" were used on the helping subscale. Similarly, only techniques judged as being "very restrictive" or "restrictive" were used on the restrictive scale. This process identified six helping and six restrictive methods.

The six helping methods included listening actively and negotiating commitments, instructing the child in coping skills, reading articles about the problem behavior, modifying the teaching style, spending the time and energy to help the child, and providing nurturance and support. The six restrictive methods included stating the rules and expecting the child to comply, using corporal punishment, recommending drug medications to control the child,

using lectures and threats, having the child removed to another classroom, and using rewards and punishments to get immediate improvement.

These methods were written as statements. The statements were ordered with the use of a random numbers table. Subjects were asked to respond in terms of how likely it is that they would use each method to manage the child's behavior described in the previous vignette. A 5-point Likert scale was used. The anchors consisted of the descriptors "very likely" and "not at all likely". The Strategies Scale can be found in Appendix F.

A factor analysis of the final sample was performed to assure that the helping and restrictive subscales represented different dimensions. A principal factoring with iteration and varimax rotation was used for the analysis. As expected, two factors emerged. One contained the six helping methods and the other contained the six restrictive methods. The items within each factor had loadings ranging from .36 to .71. None of the items loading on one factor loaded on the other factor above .06. Therefore, the helping and restrictive subscales appeared to represent different dimensions.

To assess reliability, Cronbachs Alpha Coefficients were calculated for the helping and restrictive subscales (see Table 3). The coefficient for the helping subscale was .66 and the coefficient for the restrictive subscale was .63. As a result of the preliminary factor and reliability analyses, items in the helping subscale were summed to obtain a helping score. A similar process

was followed to obtain a restrictive score.

Demographic Questionnaire. Demographic information was gathered from the subjects so that the sample could be adequately described. This information also aided in interpreting the responses to the other scales. The Demographic Questionnaire included items on gender, age, class standing, estimated grade point average, the grade level each subject would eventually like to teach, whether each subject would describe himself or herself as a generally tolerant or generally restrictive person, marital status, and whether each subject has any children. A description of practical experiences each subject has had working with children in the last three years completed this questionnaire. The Demographic Questionnaire can be found in Appendix G.

Procedures.

After this process of refining and establishing the instruments, the scales and the vignettes were combined into a seven page booklet. A cover letter explained the general purpose of the study. The first scale in the booklets was the Teacher Tolerance Scale. In half of the booklets this was followed by the vignette depicting the social immaturity child. This vignette was then followed by the Causal Dimensions Scale, the Costs Scale, and the Strategies Scale. These were followed by the vignette depicting the social defiance child, which in turn was followed by the Causal Dimensions Scale, the Costs Scale, and the Strategies Scale. In the other half of the booklets, the social defiance vignette appeared before the social immaturity vignette. The booklet concluded with

the Demographic Questionnaire, a space for subjects to comment on the project if they cared to do so, and a note thanking them for their participation.

Subjects completed the booklets during their class session. This took approximately 20 minutes. The booklets were randomly distributed so that half the sample received one version of the booklet and the other half received the alternate version. After completing and handing in the booklets, this author was available to further explain the study or answer questions.

Analysis.

Three main types of analysis were undertaken to explore how preservice teachers respond to problem behavior.

T-tests. The first type of analysis used a series of students' t-tests to examine the strength of the causal attribution factors. It will be recalled that the Causal Dimensions Scale consists of three subscales: locus of causality, controllability, and stability. Each subscale contains three bipolar items. Each of these items utilizes a 7-point Likert scale. A score is obtained by summing each of the items in the subscale. Using the stability subscale as an example, the maximum score of 21 would indicate that the cause of that behavior is believed to be highly stable. The minimum score of 3 would indicate that the cause of that behavior is believed to be highly unstable or temporary. A score of 12 would indicate that the cause of the behavior is believed to be neither clearly stable or unstable. T-tests were used to compare the subjects' score for each of the causal attribution subscales to the score of 12. A

significant difference would indicate that the cause or causes are seen as being, for example, clearly stable or unstable. Altogether, six of these t -tests were performed. Three of the tests examined the strength of the attributions for the social defiance behavior and three of the tests examined the strength of the attributions for the social immaturity behavior.

T -tests were also used to compare the choice of helping strategy and the choice of restrictive strategy within each type of problem behavior. A significant difference between the choice of strategies would indicate whether one type of strategy was clearly preferred over the other. Altogether, two of the paired t -tests were conducted. One test compared the choice of helping strategy and the choice of restrictive strategy for social defiance behavior. The other test made a similar comparison for social immaturity behavior.

Multivariate Analysis of Variance. The second type of analysis compared the subjects' response to the social immaturity and social defiance types of behavior. The subjects' responses to problem behavior at the three levels of teacher training were also examined. Stated formally, this was a 3 (levels of training) by 2 (types of behavior) repeated measured multivariate analysis of variance. The dependent variables were teacher tolerance, locus of causality, controllability, stability, costs to the teacher, costs to the class, costs to the student exhibiting the problem behavior, indirect costs, the choice of helping strategy, and the choice of restrictive strategy. Starting with differences between the types

of behavior, the differences between the levels of training and interaction effects will then be discussed.

Overall, there was expected to be a significant difference in the responses to the two types of problem behavior. The literature suggested that further analysis would reveal a number of significant differences between the individual dependent variables. Replication of these findings would lend validity to the methods and instruments used in this study. The expected significant findings for the individual dependent variables are briefly summarized below.

Teacher Tolerance. It was expected that the social immaturity behaviors would be rated as being significantly more tolerable than the social defiance behaviors. Such findings were obtained by Safran and Safran (1984) and Hutton (1984).

Causal Attributions. Results for causal attributions in this study were expected to parallel those of Brophy and Rohrkemper (1981). Social defiance behavior was expected to be seen as resulting from causes that are significantly more internal and controllable than the causes for social immaturity behavior. For the dimension of stability, it was expected that no significant differences would be found between the two types of behavior.

Costs. Results for the costs of the two types of problem behaviors were expected to be similar to those of Brophy and Rohrkemper (1981), and Safran and Safran (1984, 1985). For costs to the teacher, costs to the class, and indirect costs, the social defiance behavior was expected to be seen as significantly more costly than the social immaturity behavior. For costs to the child

exhibiting the problem behavior, the social defiance behavior was expected to be seen as being significantly less costly to that child than the behavior of the social immaturity child.

Strategies. Findings from Brophy and Rohrkemper (1981) and Elliott et al. (1984) suggest that teachers manage social immaturity children with helping techniques and social defiance children with restrictive techniques. Therefore, it was expected that the responses to the social immaturity child would be significantly more helping and less restrictive than the response to the social defiance child.

Overall, the literature was less specific as to the difference in responses of preservice teachers of different levels of training. One study, (Moore and Cooper, 1984), found that teachers with lower levels of education and experience were more disturbed by problem behaviors and tended to choose restrictive strategies to manage them. Due to a shortage of research in this area, no hypotheses were made as to how preservice teachers at different levels of their training would respond to the problem behaviors. No hypotheses were made regarding interactions between type of problem behavior and level of training for this same reason.

Regression Analysis. A third type of analysis sought to identify the factors that contributed to the subjects' choice of a helping strategy and the choice of a restrictive strategy. Identifying these factors was central to the purpose of this study. To this end, a series of regression analyses were undertaken for each type of problem behavior. In the first approach, the

procedures of stepwise regression were followed. The predictor variables were teacher tolerance, locus of causality, controllability, stability, costs to the teacher, costs to the class, costs to the child exhibiting the behavior, and indirect costs. These variables were regressed on the choice of helping strategy and the choice of a restrictive strategy for each of the two types of problem behavior. Thus, four stepwise regressions were performed.

An alternative approach to the stepwise regression analysis involved blocking variables together. In this analysis, the three dimensions of causal attributions were blocked together as one variable and the four types of costs of problem behavior were blocked together as another variable. These two blocks and the variable of teacher tolerance were the predictor variables. These variables were regressed on the choice of helping strategy and the choice of restrictive strategy for each of the two types of problem behavior. Thus, four regressions using the blocked variables were performed. This approach was undertaken to see whether causal attributions or costs contributed to the choice of strategy.

Summary.

Before changes in teacher training can be made, it is important to know more about how preservice teachers respond to problem behaviors. To this end, a sample of 152 preservice teachers filled out a questionnaire booklet containing vignettes describing a socially defiant child and a socially immature child. For each type of problem behavior, the subjects responded to instruments measuring

teacher tolerance, causal attributions, costs of problem behavior, choice of a helping strategy, and choice of a restrictive strategy.

To gain a clear picture of the responses within each type of behavior, a series of t -tests were undertaken. A multivariate analysis of variance was also performed to compare responses between the two types of problem behavior. This analysis also examined the responses to problem behavior at three levels of teacher training.

The review of literature suggested that each of the factors has some relationship to teachers' selection of a strategy to manage problem behavior. Regression analyses were undertaken to identify which factor, or block of factors, contributed the most to the choice of management strategy. It is from this information that implications for teacher training can be drawn. To move preservice teachers toward choosing helping strategies, training programs can focus on the most influential factors, whether they involve increasing teacher tolerance to certain behaviors, altering patterns of causal attributions, or altering preservice teachers' understanding of the costs of problem behaviors.

RESULTS

T-tests.

A series of students' t-tests were conducted to assess the strength and direction of the causal attribution factors. The first dimension was called locus of causality and could vary from internal to external. The second dimension was controllability which ranged from controllable, or intentional, to uncontrollable or unintentional. The third dimension was called stability and could vary from stable to unstable.

The 7-point Likert scale to measure the responses to the causal attribution items was bi-polar. Responses near the ends of this scale indicated, for example, that the causes of the problem behavior were believed to be clearly stable, or unstable. Responses near the middle of the scale indicated that the causes of the problem behavior were believed to be neither clearly stable nor unstable. Therefore, the t -tests assessed whether the actual responses to each dimension were significantly different from a hypothetical midscale response.

The results from these tests showed that social defiance behavior was attributed to causes that were significantly internal ($m = 15.5$), $t(151) = 13.70$, $p < .001$, significantly controllable ($m = 15.4$), $t(151) = 14.65$, $p < .001$, and significantly unstable ($m = 7.6$), $t(151) = -19.87$, $p < .001$.

This same pattern of causal attributions was also evident for social immaturity behavior. This type of behavior was attributed to causes that were significantly internal ($m = 15.6$), $t(151) = 12.29$, $p < .001$, significantly controllable ($m = 12.9$), $t(151) = 4.00$, $p < .001$, and significantly unstable ($m = 8.1$), $t(151) = -16.33$, $p < .001$.

Paired t -tests were used to compare the choice of helping strategy and the choice of restrictive strategy within each type of problem behavior. For social defiance behavior, the subjects were significantly more likely to choose a helping strategy ($m = 24.3$), $t(150) = 24.63$, $p < .001$, than a restrictive strategy ($m = 14.3$). For social immaturity behavior, the subjects were also significantly more likely to choose a helping strategy ($m = 25.3$), $t(150) = 43.85$, $p < .001$, than a restrictive strategy ($m = 10.8$).

Multivariate Analysis of Variance.

A multivariate analysis of variance compared the subjects' response to the social defiance and social immaturity types of behavior. The subjects' response to problem behavior at the three levels of teacher training was also examined. Stated formally, this was a 3 (levels of training) by 2 (types of behavior) repeated measures multivariate analysis of variance. The dependent variables were teacher tolerance, locus of causality, controllability, stability, costs to the teacher, costs to the class, costs to the student exhibiting the problem behavior, indirect costs, the choice of helping strategy, and the choice of restrictive strategy.

A significant multiple F main effect was found for type of

problem behavior, $F(1,149) = 114.48$, $p < .000$. This indicated that overall, the subjects' response to the social defiance behavior was significantly different from their response to the social immaturity behavior. Univariate F-tests of the separate dependent variables identified the factors in which the significant differences occurred. Table 5 presents the means and standard deviations related to these significant findings.

These findings indicated that there was significantly more teacher tolerance of social immaturity than social defiance behavior, $F(1,149) = 723.59$, $p < .001$. In addition, significantly more controllability or intentionality, was attributed to the social defiance than to social immaturity behavior, $F(1,149) = 64.67$, $p < .001$.

Furthermore, the social defiance behavior was seen as involving significantly greater costs to the teacher, $F(1,149) = 148.20$, $p < .001$, significantly greater costs to the class, $F(1,149) = 474.16$, $p < .001$, and significantly greater indirect costs, $F(1,149) = 39.78$, $p < .001$, than the social immaturity behavior. The costs to the student, however, were significantly greater for social immaturity than for social defiance behavior, $F(1,149) = 4.28$, $p < .040$.

Finally, choice of helping strategy was significantly greater for social immaturity than for social defiance behavior, $F(1,149) = 23.35$, $p < .001$. Choice of restrictive strategy was significantly greater for social defiance than for social immaturity behavior, $F(1,149) = 203.62$, $p < .001$.

Table 5

Means and Standard Deviations of Responses to Social Defiance and Social Immaturity Behaviors

	Social Defiance	Social Immaturity
Teacher Tolerance	m = 2.43 sd = .50	m = 3.51 sd = .56
Locus of Control	m = 15.55 sd = 3.20	m = 15.57 sd = 3.58
Controllability	m = 15.38 sd = 2.84	m = 12.94 sd = 2.89
Stability	m = 7.62 sd = 2.72	m = 8.09 sd = 2.95
Costs to the Teacher	m = 11.82 sd = 2.32	m = 9.34 sd = 2.19
Costs to the Class	m = 11.07 sd = 1.95	m = 5.88 sd = 2.15
Costs to the Student	m = 11.37 sd = 1.69	m = 11.84 sd = 2.38
Indirect Costs	m = 7.43 sd = 2.16	m = 6.43 sd = 2.07
Helping Strategy	m = 24.25 sd = 3.36	m = 25.33 sd = 2.83
Restrictive Strategy	m = 14.26 sd = 3.23	m = 10.83 sd = 2.49

A significant multiple F main effect was also found for level of teacher training, $F(1,149) = 1.68, p < .036$. This indicated that overall, the subjects' responses to problem behavior was significantly different across the three levels of teacher training.

Univariate F-tests of the separate dependent variables indicated that the only factor with significant differences across the levels of teacher training was the indirect costs factor, $F(1,149) = 4.50, p < .013$. The Newman-Keuls test was used to reveal where the significant differences occurred between subjects in TTL I, TTL II, and TTL III. This test indicated that subjects at TTL II ($m = 7.31, sd = .178$) rated the indirect costs of problem behavior as being significantly greater ($p < .032$), than the subjects at TTL III ($m = 6.21, sd = .243$).

Regression Analysis.

For each type of behavior, two stepwise regression analyses were performed to identify the significant contributors to choice of a helping strategy and choice of a restrictive strategy. The predictor variables were teacher tolerance, locus of causality, controllability, stability, costs to the teacher, costs to the class, costs to the student, and indirect costs.

For the social defiance behavior, the choice of helping strategy was significantly predicted by the costs to the teacher factor and the indirect costs factor. Together, these factors accounted for 10.3% of the variance in choice of helping strategy. The costs to the teacher factor was a positive predictor and accounted for 4.3% of the variance in choice of helping strategy.

The indirect costs factor was a negative predictor and accounted for an additional 6.0% of variance in the choice of helping strategy.

These figures are summarized in Table 6.

The choice of a restrictive strategy for social defiance behavior was significantly predicted by the indirect costs factor and the direct costs to the teacher factor. Together, these factors accounted for 14% of the variance in choice of restrictive strategy. The indirect costs factor was a positive predictor and accounted for 11.3% of the variance in choice of restrictive strategy. The cost to the teacher factor was also a positive predictor and accounted for an additional 2.7% of variance in the choice of restrictive strategy. These figures are also summarized in Table 6.

For social immaturity behavior, the choice of a helping strategy was significantly predicted by the costs to the class factor, the costs to the teacher factor, the indirect costs factor, and the locus of causality factor. Together, these factors accounted for 17.4% of the variance in choice of a helping strategy. The costs to the class factor was a negative predictor and accounted for 6.6% of the variance in choice of a helping strategy. The costs to the teacher factor was a positive predictor and accounted for 4.1% of the variance in choice of a helping strategy. The indirect costs factor was a negative predictor and accounted for an additional 4.5% of the variance in choice of helping strategy. Finally, locus of causality was a positive predictor and accounted for an additional 2.2% of the variance. These figures are summarized in Table 7.

Table 6
Stepwise Regression Analyses for Social Defiance Behavior

Helping Strategy						
Step	Entering Factor	B	RSQ	F	df	P-Value
1	Costs to the Teacher	+.3002	.043	6.72	1	.010
2	Indirect Costs	-.3996	.103	9.95	1	.002

Restrictive Strategy						
Step	Entering Factor	B	RSQ	F	df	P-Value
1	Indirect Costs	+.5006	.113	19.05	1	.000
2	Costs to the Teacher	+.2416	.140	12.13	1	.031

Table 7
Stepwise Regression Analyses for Social Immaturity Behavior

Helping Strategy						
Step	Entering Factor	B	RSQ	F	df	P-Value
1	Costs to the Class	-.3384	.066	10.53	1	.001
2	Costs to the Teacher	+.2756	.107	6.40	1	.012
3	Indirect Costs	-.3422	.152	8.22	1	.005
4	Locus of Causality	+.1198	.174	3.93	1	.049

Restrictive Strategy						
Step	Entering Factor	B	RSQ	F	df	P-Value
1	Costs to the Class	+.1751	.054	8.51	1	.004

The choice of a restrictive strategy for social immaturity behavior was significantly predicted by only the costs to the teacher factor. This factor was a positive predictor and accounted for 5.4% of the variance in choice of a restrictive strategy.

An alternative approach to the stepwise regression analysis involved blocking the three types of causal attributions together as one factor and blocking the four types of costs together as another factor. These factors, along with the factor of teacher tolerance, were regressed choice of a helping strategy and choice of a restrictive strategy for the social defiance behavior and the social immaturity behavior.

In these four analyses, the only significant predictor of choice of helping strategy and choice of restrictive strategy in each type of behavior was the block of variables consisting of the costs factors. For the social defiance behavior, the block of costs factors accounted for 13.4% of the variance in choice of helping strategy and 16.0% of the variance in choice of restrictive strategy. For the social immaturity behavior, the block of costs factors accounted for 15.6% of the variance in choice of helping strategy and 8.6% of the variance in choice of restrictive strategy.

DISCUSSION

An examination of the results revealed several patterns in the way preservice teachers responded to problem behavior. These patterns will be discussed in terms of responses to each type of problem behavior, comparisons between the responses to each type of behavior, comparisons between levels of teacher training, and in terms of the factors that contributed to the choice of strategy to manage the types of problem behavior. A discussion of limitations in the measurement scales and the overall design conclude this section.

Responses to Problem Behaviors.

One clear pattern involved the type of causal attributions preservice teachers made for problem behavior. Both social defiance behavior and social immaturity behavior were attributed to causes that were internal. This indicated that preservice teachers believed the causes of problem behavior lie within the child and are not due to aspects of the environment, situation, or other people. Both types of behavior were also attributed to causes that are controllable by the child. This indicated that the subjects felt the child was engaging in the problem behavior on purpose and that the child should be held responsible for their behavior. Finally, social defiance behavior and social immaturity behavior were attributed to causes that are unstable. This indicated that

preservice teachers believe the problem behavior is temporary in nature.

The picture that emerges from this pattern is strikingly one dimensional. Preservice teachers appear to attribute very different types of behavior to the same causes. This suggests a lack of awareness on the part of preservice teachers of the complex nature of behavioral causes. Whether teachers who have had more actual classroom experience share this pattern of causal attributions is not clear. Brophy and Rohrkemper (1981) suggested that experienced teachers mention more possibilities when discussing causal attributions. This may be an area for further research. An alternative explanation for the lack of awareness on the part of preservice teachers involves shortcomings in the Causal Dimensions Scale itself. This possibility is discussed later.

Another clear pattern resulted from the analysis comparing the choice of helping strategy and the choice of restrictive strategy within each behavior. For both types of behavior, the subjects were significantly more likely to use a helping strategy than a restrictive strategy. This may indicate that preservice teachers are oriented towards making professional choices that avoid potential drawbacks of restrictive methods. However, the alternative explanation that the subjects responded in a socially acceptable way to the hypothetical questionnaire situation cannot be discounted.

Comparisons Between Social Defiance and Social Immaturity Behaviors.

From examining the results of the multivariate analysis of

variance, it is apparent that there were a number of significant differences in the subjects' responses to the two types of behavior. These differences agreed with previous studies by Brophy and Rohrkemper (1981), Elliott et al. (1984), Hutton (1984), and Safran and Safran (1984, 1985), and were along the lines of the predictions made earlier. Briefly, the subjects indicated more tolerance of social immaturity than social defiance behaviors. Significantly more controllability or intentionality was attributed to the causes of social defiance than social immaturity behaviors. Both types of behaviors were attributed to causes that were equally stable. Social defiance behavior was significantly more costly than social immaturity behavior in terms of costs to the teacher, costs to the class, and indirect costs. Social immaturity behavior was significantly more costly than social defiance behavior in terms of costs to the student. Finally, significantly more restrictive strategies and significantly fewer helping strategies were chosen to manage social defiance than social immaturity behaviors.

That these results replicate previous findings lends validity to the methods and instruments in this study. Furthermore, the similarity in findings across a number of different studies suggest some consistency in the way teachers respond to different types of problem behaviors.

Comparisons Between Levels of Teacher Training.

No predictions were made as to how preservice teachers at different levels of their training would respond to problem behavior. Only one factor, that of indirect costs, showed a

significant difference between levels of teacher training. Specifically, subjects at TTL II rated the indirect costs of problem behavior as being more likely to occur than did the subjects at TTL III.

The fact that the ratings of indirect costs did not increase or decrease across the three levels of training suggested that this is a spurious finding. A possible cause of this finding involves a videotape that the TTL II subjects viewed shortly before filling out the questionnaire booklets. The videotape focused on problems facing school systems across the nation. These problems included the day to day frustrations teachers face. It is possible that this topic was fresh in the minds of TTL II subjects and influenced their responses to the indirect costs items.

On the whole, the lack of significant differences across the three levels of teacher training suggested two possibilities. The first possibility is that preservice teachers' tolerance, causal attributions, perceptions of costs, and hypothetical choice of strategies do not change significantly as they progress through their training program. The other possibility is that the three levels of teacher training described by this study were not distinct enough from one another for significant differences to occur. Further research that maximizes the differences between groups in terms of coursework and teaching experience may detect significant differences in the factors at different levels of training or experience.

Factors Contributing to Choice of Strategy.

From examining the regression analyses, it is apparent that the costs of problem behavior made more of a significant contribution to the subjects' choices of strategy than other factors. In the analysis utilizing blocks of variables, the block of costs entered the regression equation before the block of causal attributions and the factor of teacher tolerance. For the regression analysis in which each of the costs factors and each of the dimensions of causal attributions were entered as separate factors, the factors of costs to the teacher, costs to the class, and indirect costs made the significant contributions to choice of strategy. These three costs factors are discussed below.

The costs to the teacher factor contributed significantly to the choice of helping and restrictive strategy for the social defiance type of behavior and the choice of a helping strategy for the social immaturity type of behavior. In addition, further inspection of the regression coefficients indicated that the costs to the teacher factor approached making a significant contribution to the choice of a restrictive strategy for the social immaturity behavior ($RSQ = .076$, $F = 3.46$, $p < .06$). In each of these four analyses, the regression coefficients for the costs to the teacher factor was positive. That is, as cost to the teacher increased, the choice of both helping and restrictive strategies increased. This indicated that the costs to the teacher factor may have played a similar role in the choice of helping and restrictive strategies for each type of behavior. One interpretation of this situation is that

costs to the teacher serve as a general factor that motivates the teacher to choose some strategy. Which type of strategy is chosen to manage the behavior appears to be best predicted by other costs factors which are discussed below.

For the social defiance type of behavior, the indirect costs to the teacher factor made a significant negative contribution to the choice of a helping strategy and a significant positive contribution to the choice of a restrictive strategy. That is, as indirect costs to the teacher increased, the choice of a helping strategy decreased and the choice of a restrictive strategy increased. This indicated that a preservice teacher would help a socially defiant child when the indirect costs to that behavior are low. This finding suggested that a teacher's concern for their own status, in terms of parent, peer and principal evaluations, overrides their concern for a child with social defiance behavior. That is, restrictive methods are relied on to suppress the behavior with less thought given to the potential undesirable effects of those methods on children.

For the social immaturity type of behavior, the costs to the class factor made a significant negative contribution to the choice of a helping strategy and a significant positive contribution to the choice of a restrictive strategy. That is, as costs to the class increased, the choice of a helping strategy decreased and the choice of a restrictive strategy increased. This indicated that a preservice teacher would help a socially immature child when the costs to the class of that type of behavior are low. For social immaturity behaviors, then, it appears that a teacher's concern for

the whole class may take precedence over their concern for an individual child. That is, when the class is not being distracted by social immaturity behaviors then the teacher will pause to help that child.

From examining the patterns of these costs and their relationships to choice of strategy, two implications for teacher training become apparent. These implications involve training preservice teachers to manage the costs to the class and the indirect costs of problem behavior. If these costs can be kept low, then it appears that teachers with little experience will be more likely to choose helping strategies to manage problem behavior. This is discussed in greater detail below.

Although this study did not investigate this possibility, managing the costs to the class may be the more important area for training to focus on. These costs to the class may precede the indirect costs to the teacher. The rationale for this interpretation is as follows. The costs to the class included the likelihood that the problem behavior would hurt other children, keep other children from learning, and be imitated by other children in the class. If these events were occurring in a classroom it seems likely that the indirect costs would increase. The indirect costs included the likelihood that the problem behavior would cause parents to question the teacher's ability to teach, lead other teachers to have less respect for the teacher, and make the principal give the teacher a poor evaluation. If costs to the class were low, then the indirect costs may also be low. The implications

for choice of strategy also follow logically from this line of reasoning. That is, low costs to the class and low indirect costs appear to be important contributors to choice of a helping strategy.

While this line of reasoning is attractive, there are several other aspects of the data that suggested more conservative interpretations. First of all, it may be recalled that the subjects' choice of helping strategy was considerably greater than their choice of restrictive strategy for both types of problem behavior. In this light, altering teacher training so that preservice teachers are more likely to choose helping strategies would result in their making only a minimal shift away from choosing restrictive strategies. The possibility does exist, however, that the responses to the Strategies Scale heavily reflected social and professionally acceptable choices rather than actual choices.

There is another aspect of the data that tempers implications for teacher training. This involves the low amount of variance in the choice of strategies that was accounted for by the various factors. At best, factors making a significant contribution to choice of strategy accounted for less than 18% of the variance in choice of strategy. This suggests a number of possibilities. For example, there may be other influential factors that were not included in the model used by this study. Limitations in the measurement scales or the overall design may also be involved. These possibilities are discussed further in the next section on limitations.

Limitations.

The causal attributions of locus of causality, controllability, and stability failed to make a significant contribution to choice of management strategy. Several explanations may account for these results. First of all, causal attributions are complex in nature. It may take considerable familiarity with the overall situation and the other person to accurately and consistently record impressions or opinions of the causes of their behavior (Weiner, 1979). The preservice teachers in this study may not have had enough exposure to the teaching milieu to develop a firm sense of causal attributions.

Secondly, causal attributions require a certain amount of background information. There may not have been enough information in the vignettes for the subjects to form firm impressions or opinions of the cause or causes of the children's behavior. In support of this explanation, several subjects noted in written comments at the end of the questionnaire booklet that it was difficult to respond to the questions on the basis of so little information.

A third possibility involves measurement problems in the Causal Dimensions Scale itself. This scale consisted of nine double-ended items. As with many similar double-ended scales, there is some uncertainty in making and interpreting responses falling near the middle of the scale. In addition to this, the descriptors anchoring each end of the scales were general terms rather than terms specific to a classroom situation. This may have led subjects to interpret

the items in different ways. While Russell (1982) reported satisfactory reliability coefficients, an analysis of this modified instrument suggested lower reliability. Weiner (1985) has shown that people in a variety of everyday situations do make causal attributions along the proposed dimensions. Measuring the attributions that teachers, or preservice teachers, make about children may depend upon developing an instrument with more specific items and unambiguous scales.

The factor of teacher tolerance also failed to make a significant contribution to the selection of a management strategy. This may have been partly due to the way in which teacher tolerance was defined. In this study, a problem behavior was defined as being tolerable if it was not seen as being disturbing to the teacher. Teacher tolerance was also defined in this manner by Algozzine (1979) and Safran and Safran (1984).

Even though this definition of teacher tolerance appeared in the instructions to the Teacher Tolerance Scale, there was some confusion on the part of the subjects. Several of the subjects wrote comments at the end of the questionnaire booklet to qualify their responses to the scale or to express some concern about it. Despite having been given this definition, it appears that the subjects may have interpreted teacher tolerance in different ways. For example, teacher tolerance may be interpreted as the amount of behavioral variation the teacher will allow from some set standard. Other interpretations may include the teacher's ability to endure a behavior, or the teacher's capacity to ignore a behavior. In noting

these different interpretations, future investigations using the construct of teacher tolerance should consider clearly defining the term as well as thinking through how that definition relates to the overall purpose of the study.

In addition to teacher tolerance, several other terms describing teachers' perceptions of problem behavior are used throughout the research literature on education. These terms include the degree to which problem behaviors concern or disturb teachers as well as the degree to which teachers judge problem behaviors to be severe, manageable, and contagious. Many of these terms would appear to be closely related and frequently they are used interchangeably. However, to gain a clearer picture of teachers' perceptions of, and responses to, problem behavior, the relationships between these constructs need to be clarified in greater detail.

The costs of problem behavior did make a contribution to choice of a management strategy; however, there may be some limitations in the Costs Scale. A factor analysis of this scale revealed that Item 5 and Item 10 loaded highly on more than one factor or subscale. Item 3 had only a low loading on one factor and negative loadings on the other factors. In this study, these items were included in their respective factors on the basis of a theoretical rationale. This solution may have inaccurately accounted for the actual effect of several costs items on the choice of management strategy. Therefore, future research using the construct of costs might consider experimenting with different items or the wording of the

actual items to achieve a more statistically satisfactory scale. Eliminating items with low factor loadings might also be considered if such a step does not diminish the predictive power of the subscale.

A limitation of the overall design of this study involves the sex of the child depicted in the vignettes. In this study, male subjects read vignettes depicting male children. Female subjects read vignettes depicting female children. This arrangement was devised to control a source of bias that may occur when a subject rates a child of the opposite sex. However, given the wide majority of female subjects, the results of this study largely reflect the way in which female subjects respond to problem behavior in female children.

Dusek and Joseph (1983) note that a child's gender is but one of many personal characteristics that may influence a teacher's expectations. If the children depicted in the vignettes were all male children, then the results may have varied somewhat from the findings that were obtained. Further research will be required to unravel the effects of child gender, teacher gender, type of problem behavior, and their interactions.

Finally, a common dilemma of studies using manipulated information such as vignettes is that they generally only measure the subject's initial response. It is more realistic to assume that a subject's response would change over time as the situation changes. In writing on teacher expectations, Brophy (1983) suggested that this is in fact the case. Ongoing teacher-student

interactions are thought to mediate inaccurate initial expectations. Presumably this is also the case with initial strategies to manage problem behavior.

Measuring this shift of response to problem behavior presents several problems when the subjects are preservice teachers. It is difficult, for example, to create a naturalistic setting where preservice teachers interact with children over time and also have some say in how their behavior is managed. Therefore, it appears that more complex research designs making uses of manipulated information are needed.

The design employed by Cooper (1979) is one such example. Subjects were given some preperformance information on a child and asked to predict that child's current performance. Subjects were then given information on the child's current performance and were asked to predict that child's future performance. A design similar to this one could provide a clearer picture of the ways in which preservice teachers' strategies to manage problem behavior change over time. This type of information may temper, or provide further insight into implications for altering teacher training programs.

Summary.

In several ways, preservice teachers responded to problem behavior in patterns that are one dimensional. Specifically, the subjects attributed social defiance and social immaturity behavior to causes that are internal, controllable by the child, and unstable. These subjects also indicated they would predominantly use a helping strategy to manage these types of behavior. The

similarities in responses to two very different types of problem behavior suggested that preservice teachers lacked awareness of, or perhaps experience with, the complexities of problem behavior in children.

When comparisons between responses to the two types of behavior were made, the results paralleled the findings of previous research. On the whole, social defiance behavior was seen as being less tolerable, more controllable by the child, more costly, and more likely to be managed with a restrictive strategy than social immaturity behavior. These analyses provided a clearer picture of how preservice teachers respond to problem behavior and lent validity to the overall design and instruments of this study.

The factors that best predicted the choice of strategy were the costs factors. The costs to the teacher factor was interpreted as a general motivating factor for choosing a strategy. The costs to the class factor and the indirect costs factor appeared to determine whether the strategy chosen was helping or restrictive in nature. It is from these findings that implications for teacher training programs become apparent. Training preservice teachers to manage costs to the class and indirect costs may make them more likely to choose helping strategies.

Finally, several limitations in the present study were discussed. These limitations involved the instruments and elements of the overall design. Suggestions for further research were made to clarify interactions between child gender, teacher gender, type of problem behavior, and their interactions. Alternative research

designs to go beyond assessing initial responses to problem behavior based on a limited amount of information were also discussed.

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APPENDICES

APPENDIX A
Cover Letter

Dear Teacher Trainee:

As a teacher, you will meet many children with behavior problems. These children are a major challenge to teachers. Will you be prepared to effectively manage their behavior? Research shows that many new teachers do not feel well prepared to deal with these children.

Several factors have been identified that influence how teachers manage problem behavior children. Exploring how these factors influence the way teacher trainees deal with these children is the focus of this research project. A better understanding of this decision process will yield ways of improving teacher training.

Please take the time to carefully read and honestly respond to each of the following items. You are not asked to write your name on this questionnaire. All your responses will be anonymous.

Educators have long been interested in how to train better teachers. Your input can help future teachers be better prepared to deal with problem behavior children.

Thank you very much for your cooperation.

APPENDIX B
Teacher Tolerance Scale

As a future teacher, you will find some child behaviors to be more disturbing, or less tolerable, than other child behaviors. Please circle one number to the right of each child behavior to indicate how tolerable it is to you.

	not at all tolerable			tolerable	
Destructiveness	1	2	3	4	5
Repetitive speech	1	2	3	4	5
Distractibility	1	2	3	4	5
Easily flustered	1	2	3	4	5
Incoherent speech	1	2	3	4	5
Negativism	1	2	3	4	5
Preoccupation	1	2	3	4	5
Doesn't know how to have fun	1	2	3	4	5
Feelings of inferiority	1	2	3	4	5
Social withdrawal	1	2	3	4	5
Lack of self-confidence	1	2	3	4	5
Irritability	1	2	3	4	5
Impertinence	1	2	3	4	5
Nervousness, jitteriness	1	2	3	4	5
Inattentiveness	1	2	3	4	5
Fighting	1	2	3	4	5
Disobedience	1	2	3	4	5
Drowsiness	1	2	3	4	5
Boisterousness, rowdiness	1	2	3	4	5
Aloofness	1	2	3	4	5
Uncooperativeness	1	2	3	4	5
Fixed expression	1	2	3	4	5
Attention seeking	1	2	3	4	5
Tension, inability to relax	1	2	3	4	5
Depression, chronic sadness	1	2	3	4	5
Irresponsibility	1	2	3	4	5
Disruptiveness	1	2	3	4	5
Clumsiness	1	2	3	4	5
Temper tantrums	1	2	3	4	5
Passivity, sluggishness	1	2	3	4	5
Shyness, bashfulness	1	2	3	4	5
Hypersensitivity	1	2	3	4	5
Physical complaints	1	2	3	4	5
Laziness in school	1	2	3	4	5
Anxiety	1	2	3	4	5

APPENDIX C
Vignettes

Social Defiance Vignette.

Imagine that you teach in a regular classroom at an elementary school. It is the start of new school year. You have just taught your class for the first week. Several children exhibit behaviors that disturb you. A brief description of one of these children appears below. Please read it and respond to the questions that follow. If you would find it helpful to refer back to the description in responding to the questions, please do so.

Several times this week you saw Jane hitting or pushing other children in the class for no reason. You have also heard Jane use swear words and call other children names. One day Jane ripped several pages out of another child's book. When you told her to go sit down, she clenched her fists, stomped her foot on the floor, and refused to go sit down.

Social Immaturity Vignette.

Here is the description of another child whose behavior disturbs you. Once again, please read it and respond to the questions that follow. If you would find it helpful to refer back to this description in responding to the questions, please do so.

Whenever you speak to Anne, she keeps her eyes lowered. Sometimes she doesn't reply. Other times she only replies in a whisper. One day you introduced a new activity. While you gave the instructions, you noticed that Anne was wringing her hands. Another day several other children invited Anne to work with them. She turned away and did not join them. Rather than working by herself, Anne stood to one side and watched the other children. From the look on her face it was hard to tell if she wanted to join in, or was sad.

APPENDIX D
Causal Dimensions Scale

The items below concern your impressions or opinions of the cause or causes of Jane's behavior. Please circle one number for each of the following scales.

- Is the cause(s) something that
reflects an aspect of Jane 1 2 3 4 5 6 7 reflects an aspect of
the situation
- Is the cause(s)
controllable by Jane or other people 1 2 3 4 5 6 7 uncontrollable by Jane
or other people
- Is the cause(s) something that is
permanent 1 2 3 4 5 6 7 temporary
- Is the cause(s) something
intended by Jane or other people 1 2 3 4 5 6 7 unintended by Jane or
other people
- Is the cause(s) something that is
outside of Jane 1 2 3 4 5 6 7 inside of Jane
- Is the cause(s) something that is
variable over time 1 2 3 4 5 6 7 stable over time
- Is the cause(s)
something about Jane or other people 1 2 3 4 5 6 7 something about Jane or
other people
- Is the cause(s) something that is
changeable 1 2 3 4 5 6 7 unchangeable
- Is the cause(s) something for which
no one is responsible 1 2 3 4 5 6 7 someone is
responsible

APPENDIX E
Costs Scale

Jane's behavior may have consequences for you, for other children, or for Jane herself. Please circle one number to the right of each statement below to indicate how likely you think it is.

	not at all likely					very likely
Jane's behavior will:						
take a lot of your energy to deal with.	1	2	3	4	5	
hurt other children in the class.	1	2	3	4	5	
interfere with her physical development.	1	2	3	4	5	
make the parents question your ability to teach.	1	2	3	4	5	
make you feel less in control of the classroom.	1	2	3	4	5	
keep other children in the class from learning.	1	2	3	4	5	
keep Jane from making friends in the class.	1	2	3	4	5	
make the other teachers in the school have less respect for you.	1	2	3	4	5	
be emotionally draining for you to deal with.	1	2	3	4	5	
be imitated by other children in the class.	1	2	3	4	5	
interfere with her learning in class.	1	2	3	4	5	
make the principal give you a poor evaluation.	1	2	3	4	5	

APPENDIX F
Strategies Scale

Teachers use many different methods to deal with or manage children's behavior. Please circle one number for each scale below to indicate how likely it is that you would use that method to deal with Jane's behavior.

	not at all likely	2	3	4	very likely
I would:					
listen actively and negotiate commitments.	1	2	3	4	5
state the rules and expect Jane to comply.	1	2	3	4	5
use corporal punishment if it was allowed.	1	2	3	4	5
instruct Jane in coping skills.	1	2	3	4	5
read articles about Jane's behavior.	1	2	3	4	5
recommend drug medications to control Jane.	1	2	3	4	5
use lectures and threats.	1	2	3	4	5
modify my teaching style.	1	2	3	4	5
have Jane removed to another classroom.	1	2	3	4	5
spend the time and energy to help Jane.	1	2	3	4	5
provide nurturance and support.	1	2	3	4	5
use rewards and punishments to get immediate improvement.	1	2	3	4	5

APPENDIX G
Demographic Questionnaire

The following questions request some information about you. This information will be helpful in interpreting your responses to the previous questions.

1. Gender (check one)
 female male
2. Birthdate (fill in)
 month day year
3. Class Standing (check one)
 freshman sophomore junior
 senior other
4. Grade Point Average (fill in estimate)
5. What grade level would you like to teach? (circle one,
pre K 1 2 3 4 5 6 7 8 9
10 11 12 other
6. How would you describe yourself as a person? (check one)
 generally tolerant generally restrictive
7. Marital Status (check one)
 single married other
8. Do you have any children: (check one)
 no yes
If yes, indicate their ages (fill in)
, , , , .
9. Briefly describe the practical experiences you have had working with children during the last three years. Please use the chart below.

Experience Description	Position	Number of Hours/Week	Length of Time