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# Behavioral Analysis of Interactions Between Teachers and Children with Selective Mutism

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Behavioral Analysis of Interactions Between Teachers and Children  
with Selective Mutism

by

Jason D. Wallace

A thesis submitted in partial fulfillment  
of the requirements for the degree of  
Master of Arts in Applied Behavior Analysis  
College of Graduate Studies  
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## Dedication

This thesis is dedicated to my parents, Kitty and Roger Wallace for helping me up the mountain, and to my wife Kirsten for helping me get over the top.

## Table of Contents

List of Tables	ii
List of Figures	iii
Abstract	iv
Chapter One: Introduction	1
Chapter Two: Method	22
Setting and Participants	22
Design	22
Instruments	23
Dependent Measures	23
Observer Training	24
Procedures	24
Chapter Three: Results	27
Reliability	27
Tests and Measures Used During the Intervention	29
Visual Analysis of Data	30
Statistical Analyses	37
Inter-response Time (IRT)	40
Anecdotal Observations	40
Chapter Four: Discussion	49
Limitations	51
Future Research Considerations	52
Conclusion	52
References	54
Appendices	62
Appendix A: Data Collection Sheet	63
Appendix B: Observation Code for Dependent Variables	64
Appendix C: Teacher Training	65

## List of Tables

Table 1a.	Interobserver Agreement for Teachers' Data	28
Table 1b.	Interobserver Agreement for S1's Data	28
Table 2.	Results for Pre-test/Post-test for Experimental Group	29
Table 3.	Within Teachers	38
Table 4.	Across Control and Experimental Groups	38
Table 5.	Within Teacher Baseline-Intervention Comparison	39

## List of Figures

Figure 1.	Teachers' Total Questions to S1 in Class	43
Figure 2.	Teachers' Questions (by Type) to S1 in Class	44
Figure 3.	S1's Responses to Teachers' Questions and Task Requests	45
Figure 4.	Teachers' Verbal and Non-verbal Task Requests of S1	46
Figure 5.	Teachers' Total Questions to Everyone in Class	47
Figure 6.	Teachers' Questions (by Type) to Everyone in Class	48

# Behavioral Analysis of Interactions Between Teachers and Children with Selective Mutism

Jason D. Wallace

## ABSTRACT

The present study focused on the interactions between a child with selective mutism and that child's teachers. The hypothesis was that the teachers unknowingly maintained the mutism by not placing the expectations of speech on the child. Therefore, by training three out of the four teachers how to interact with the child with selective mutism, and using the fourth teacher as a control, the researchers were able to identify that the training not only changed the three teachers' behaviors, but also the child with selective mutism's behaviors as well. Also, based on a pre-training/post-training test, the teachers had a much better understanding of the disorder after the training was implemented. The control's behaviors did not change during the course of study.

## Chapter One

### Introduction

Selective mutism, according to the DSM-IV-TR (American Psychiatric Association, 2000), is a rare disorder that is found predominantly in children. Individuals diagnosed with selective mutism, while demonstrating the ability to speak and understand language, do not speak in select social situations in which there is an expectation for speaking, despite speaking in other situations. In order to be diagnosed as selectively mute, the individual must also be without disorders or disabilities that may account for the inability to speak (e.g., communication disorders, psychosis, or pervasive developmental disorder), and symptoms must persist for at least one month (not limited to the first month of school).

Although the literature on selective mutism has not been given the attention that some of the more common and frequent psychological disorders have received, the history of selective mutism has been well documented and occurrences have been reported across multiple cultures, countries, and genders (Steinhausen, 1996). The German physician, Kussmaul, first used the term “aphasia voluntaria” in 1877 to describe “mentally sound” people who refused to speak. Over the course of time the disorder took on a variety of names from “thymogenic mutism” (Waterink & Vedder, 1936) to “speech inhibition” (Chapin & Corcoran, 1947) to “psychogenic mutism” (Mitscherlich, 1961). In 1934, Tramer coined the term “elective mutism,” with the belief that individuals were



“electing” not to speak. Hesselman (1973) suggested that the term “selective mutism” was more descriptive because the individual was not electing to be mute, but rather the mutism was selectively dependent on social context (Dummit et. al., 1997). Thus, the term “elective mutism” was replaced with the publication of the DSM-IV (American Psychiatric Association, 1994).

Reed (1963) proposed that most children who are selectively mute fall within two categorical groups. The first group is characterized as immature and manipulative, and the mutism is maintained by social reinforcement (e.g., attention from peers, teachers, and family members). The second group is characterized as tense and anxious, possibly caused by speech phobia, and the mutism is maintained by the avoidance of anxiety produced by speaking. Hayden (1980) expanded upon this notion of variant types of selective mutism, or as Hayden terms them, “subtypes”. According to Hayden (1980) there are five different subtypes of selective mutism (only four are applicable under DSM-IV criteria). The first subtype is called “symbiotic mutism,” in which the child uses a clinging, shy, and sensitive exterior to manipulate and control his/her environment. The second subtype, “passive-aggressive mutism,” is characterized by the child’s “defiant refusal to speak,” which is a manifestation of the child’s hostility towards others. In the third subtype, “reactive mutism,” the child’s refusal to speak is related to a specific traumatic event, or the accumulation of a number of traumatic events. The fourth subtype, “speech phobic mutism,” is characterized by the child’s fear of hearing his/her own voice. The fifth subtype, “biological mutism,” is excluded under the current diagnostic criteria of the DSM-IV (Leonard & Dow, 1995). According to Hayden (1980), this subtype is a manifestation of another disorder (i.e., autism).

The epidemiological reports of the frequency at which selective mutism occurs vary throughout the literature. According to Leonard and Dow (1995), the number of selective mutism cases presented in the literature may be only a fraction of the number of actual cases, because most of them do not come to the attention of medical personnel and/or resolve with age. Fundudis and colleagues (1979) identified two selectively mute children out of a population of 3,300 (.06%) second-graders. Brown and Lloyd (1975) identified one selectively mute child out of 6,072 (.0001%) children. Initially, the researchers reported a much higher rate of 42 out of 6,072 children, however when the researchers re-assessed the count at 56 weeks into the school year, the rate had decreased dramatically to the previously reported number. Similarly, Bradley and Sloman (1975) reported an extremely low rate of 26 out of 6,865 children (.003%). Recent studies however indicate that selective mutism occurs at a much higher rate than these earlier studies identified (Carlson, 1994; Kopp & Gillberg, 1997; Kumpulianen, 1998). The gender ratio of selective mutism according to Tancer (1992) is 1:1.7 male to female, and similarly Steinhausen & Juzi (1996) reported a 1:1.6 ratio. The average age at the reported onset of the disorder is 3-8 years (Klin & Volkmar, 1993) or 5-7 years (Halpern, Hammon, & Cohen, 1971; Slukin, 1977).

As with most disorders, there is no single characteristic that is shared by all of the individuals with selective mutism. Steinhausen and Juzi (1996) conducted an analysis of 100 cases of selective mutism in which they examined a multitude of different characteristics in the hope that if there were shared characteristics among individuals with selective mutism, they may provide some insight into this perplexing disorder. The results showed that no two individuals with selective mutism are alike. However, some

interesting characteristics were common among several cases. For example, shyness was reported in 85% of the cases, anxiety in 66% of the cases, depression in 36% of the cases, opposition-defiance/aggression in 21% of the cases, hyperactivity in 17% of the cases, sleeping disorders in 30% of the cases, eating disorders in 21% of the cases, nervous tics in 12% of the cases, enuresis (urinating) in 25% of the cases, encopresis (elimination) in 8% of the cases, and obsessions/compulsions in 9% of the cases. Also, 89% of the cases reported that the individuals were selectively mute in school.

Kolvin and Fundudis (1981) conducted a study in which they analyzed 24 cases of selective mutism. In addition to analyzing the cases, the authors compared the group of individuals with selective mutism to a group of individuals with speech impairments, and a control group, which was not diagnosed with any disorders. The differences they found between the groups were noteworthy. Similar to Steinhausen and Juzi's (1996) findings, 42% of those in the selective mutism group were enuretic, as compared to 15 % in the control group and 25% in the speech-impaired group. Also, 17% of those in the selective mutism group were encopretic, as compared to 2% of the controls and 7% of those in the speech-impaired group. The authors also tested each group for speech abnormalities and normal speech development. They found that the selective mutism group had a particularly high (50%) rate of speech abnormalities. Similarly, Wright (1968) reported that 20% of his 68 selective mutism cases had speech abnormalities. The results from these two studies indicate that the development of speech, or lack thereof, may be a contributing factor to the onset or maintenance of selective mutism. According to Dow and colleagues (1995), speech abnormalities are often found as secondary characteristics to the mutism, and can exist co-morbidly with the disorder. Further

research is needed in this area to assess the potential effects that speech abnormalities may have during the onset and maintenance of selective mutism.

There is no known cause for selective mutism and according to the research; the etiology of the disorder appears to be dependent upon a number of factors (Leonard & Dow, 1995). There are a variety of different theories about what causes selective mutism. One of those theories is that selective mutism is the result of unresolved psychodynamic conflict, or intrapsychic conflict (Atlas, 1993; Elson, 1965; Lysne, 1995; Wergeland, 1980; Youngerman, 1979). According to Atlas (1993), “the psychodynamic significance of elective mutism is emblematic of tenuous experience of the self as differentiated from, yet within, the surrounding human and nonhuman environment” (p. 1080). In other words, these individuals are suffering from distress because they are in certain environments, yet they do not feel as though they are a part of the environment. The validity of this theory is difficult to test empirically because it relies solely on the client’s verbal report as to what is happening and the therapist’s interpretation of those reports.

Another theory is that selective mutism is not a disorder, but rather a manifestation of social phobia (Black & Uhde, 1992; Black & Uhde, 1994; Crumely, 1990; Dummitt, 1996; Dummit, Klein, Tancer, Asche, Martin & Fairbanks, 1997; Golwyn & Weinstock, 1990; Kratochwill, 1981; Leonard & Topol, 1993; Watson, 1995; Wright, 1995). Crumely (1990) reported a 20-year follow-up of a case of selective mutism in which the individual describes in detail how he used to feel prior to, or while he was speaking. The individual reported that he felt a kind of panic, like high blood pressure. He also said, “I was afraid to say the wrong thing or do anything in front of others

because I might say or do the wrong thing” (p. 319). According to Crumely (1990) the descriptions that he gave suggested that he might suffer from social phobia.

Black and Uhde (1992) describe social phobia as, “an anxiety disorder characterized by a persistent fear of one or more social situations in which the person exposed to possible scrutiny by others fears that he or she may do something or act in a way that will be humiliating or embarrassing” (p. 712). Black and Uhde (1992) presented a case of selective mutism in which the individual suffered from a fear of public humiliation and therefore failed to speak in select social contexts. The individual reported that she did not want to talk “because her voice sounded funny and she did not want others to hear it” (p. 714). The choice of treatment for this individual was based on the notion that she suffered from a form of social phobia. Although the treatment proved to be an overall success with the administration of fluoxetine, the failure of the first anti-anxiety medication used, desipramine, should be noted (Black & Uhde, 1992). The lack of data in this study fails to assist others in understanding how effective this treatment really was.

The broader etiological approach by many of the authors in the selective mutism literature is to view anxiety in general, not specifically social phobia, as the cause of selective mutism (Carlson et al., 1994; Dow, Sonies, Scheib, Moss & Leonard, 1995; Golwyn & Weinstock, 1990; Leonard & Topol, 1993; Reed, 1963; Shreeve, 1991). In a study by Wilkins (1985), a control group, which consisted of children with emotional disorders, was compared to a group of children with selective mutism. According to subjective reports, the children with selective mutism were thought to be more anxious and depressed than the children in the control group. Carlson and colleagues (1994)

theorized that this finding, “might suggest that the mutism is a manifestation of an underlying anxiety or depressive disorder” (p. 283).

Several authors have theorized that family conflict, or family pathology contributes to the development of selective mutism (Bradley, 1975; Elson, 1965; Meijer, 1979; Meyers, 1984; Pustrom & Speers, 1964; Radford, 1977; Subak, 1982; Wright, 1968). According to a study by Wright (1968), in 24 cases of selective mutism, the most common finding was the dependent relationship between the mother and child, which had an effect on the child’s relationships with others. In a study by Pustrom and Speers (1964), the authors treated the entire family unit, “in which mutism was viewed as the symptomatic expression of family conflict.”

The idea that selective mutism is learned behavior offers another theory to the etiology of the disorder (Albert-Stewart, 1986; Goll, 1979; Halpern, Hammond & Cohen, 1971; Kehle, Owen, & Cressy, 1990; Kratochwill, 1981; Porjes, 1992; Reed & Mees, 1963; Rosenberg & Lindblad, 1978; Shaw, 1971; Sluckin, 1977; Watson, 1992). Reed and Mees (1963) conducted the first published empirical study examining selective mutism as learned behavior. The authors treated the individual with selective mutism by gradually exposing her to strangers in an environment in which she already spoke. The rationale behind this treatment approach was to extinguish the pattern of learned behavior that was socially reinforced by the significant others in her life. The authors theorized that strangers would not be paired with the selective mutism, and alternative behaviors would be reinforced. The treatment was successful.

According to Kehle and colleagues (1990), the primary contribution of social learning theory has been the analysis of learning through witnessing a model.

Cunningham and colleagues (1984) indicate that several authors suggest that modeling by anxious family members may contribute to the anxiety many selectively mute children evidence in speech situations. According to Brown and Lloyd (1975), more often parents of selectively mute children describe themselves as shy, as compared to control families. This finding by Brown and Lloyd (1975) raises an important question. How can we be sure that anxious behaviors are not modeled and reinforced by the family? What is the evidence for anxiety as a genetic trait? After all, it is not a genetic trait that is found in every family with an individual with selective mutism. Can it be a set of behaviors that are reinforced by certain families, and then maintained and perpetuated by those families?

With respect to selective mutism, a multitude of treatment approaches have been designed and implemented. The treatments have ranged from the more traditional psychotherapeutic approaches, to non-traditional treatments such as dance therapy. A review of the literature revealed more than 15 different treatment approaches. It should be noted at this time that while several articles have reported using the same treatment as another article (e.g., stimulus fading), there might be variations with the way in which each treatment was implemented. The treatments that appear most often in the literature are psychotherapy, multi-modal (combination of various approaches), stimulus fading, and pharmacological (which has become the most frequently reported treatment within the last decade).

Under the umbrella of psychoanalysis, two different treatment modalities have been reported. The most common of these psychoanalytic treatment approaches is one-on-one, or individual therapy (Ambrosino & Alessi, 1979; Atlas, 1993; Blotcky &

Looney, 1980; Chethik, 1973; Jacobsen, 1995; Krolian, 1988; Meijer, 1979; Meyers, 1984; Shreeve, 1991; Shvartzman, 1990; Subak, 1982). In individual therapy the therapist and the client meet on a regular basis to try and resolve the mutism using a variety of methods (drawing, painting, playing games, role playing, etc.). The other type of psychoanalytic treatment approach is family therapy (Atoynatan, 1986; Beck & Hubbard, 1987; Lindblad-Goldberg, 1986; Tatum & DelCampo, 1996; Zelenko & Scanlan, 1983) in which the family is viewed as the impetus for the disorder, and thus treated as such.

Ambrosino and Alessi (1979) presented a case in which they viewed the mutism as a result of the child's attempts to "freeze time" due to the loss of her father. The authors viewed this process of "freezing time" as a method of not relating to the world, in order to deny her father's death. One of the contributing factors, according to the authors, was the mother-child relationship, in which the mother's manner of dealing with the problem was reflected in K.'s (the client) mutism, "if I stay silent, nothing will change and I will be safe." The authors described the treatment as a process of establishing trust by experiencing each other. The experiences that were shared "broke the silence which held her to her dead father and the protection of his love." According to the authors, whether or not the client spoke was not their major concern, instead understanding *why* she did not speak was the major concern. The focus was not on the problem itself, rather the underlying psychological conflict. Treatment success was reported as, "A breakthrough in terms of spontaneous speech. It was her response to human efforts, which had been honesty extended to her. This exchange of gifts unlocked



the years of silence that had resisted all methods of treatment previously attempted” (Ambrosino & Alessi, 1979).

Jacobsen (1995) presented a much different case in which the client was not only diagnosed with selective mutism, but also disassociative identity disorder. The client had been sexually abused during infancy, and also witnessed the death of a sibling and friend. According to the author these traumatic events were at the root of both of the diagnoses, but the mutism was a secondary characteristic of the disassociative identity disorder. After several weeks of therapy the reason for the mutism was revealed by one of the identities as “a way to save him from death”. Although the author did not mention the specific details of the treatment that was used, she did note that the client made considerable progress after the diagnosis for disassociative identity disorder was given. It is important to note that neither of the two previously mentioned articles are data based. Thus it is difficult to validate the claims made about assessment and treatment of the individuals. It is also important to note that no follow-up reports are provided to address the question of whether the individuals have continued to verbalize, or if the mutism re-occurred.

As previously mentioned, the lack of data makes it difficult for the reader to assess what has transpired in both of the cases. Also, the absence of a detailed description of what the treatment consisted of makes it impossible for the study to be replicated. Both of these articles represent the rest of the psychotherapeutic literature fairly accurately, in that they are case studies that cannot be generalized to other cases of selective mutism. They do, however, serve a valuable purpose for the reader by providing detailed descriptions of their experience with selective mutism.

In a study by Lindblad-Goldberg (1986), the author postulated four factors that can be attributed to the development of selective mutism in children. The first factor is the developmental vulnerability of the child. According to Lindblad-Goldberg (1986), “The selectively mute child is born into a family in which the unspoken needs and tensions of the family members have led them to believe that there is safety in silence and distance from the extra-familial environment.” The second factor is the family’s four characteristics: 1) enmeshment, 2) over protectiveness, 3) lack of conflict resolution, and 4) rigidity. The third factor is the avoidance of conflict by the family, which reinforces the symptom. And the last factor is, the family has a developmental crisis whenever they face an increased exchange between the family and extra-familial environment.

The treatment approach that was used in this study was much more operationalized than the other articles that reported using family therapy. The first phase of treatment consists of assessing the specific problems that surround the disorder, redefining the problem, setting the treatment goals, and selection of treatment units with the family. The second phase of the treatment consists of play enactment and reinforcement techniques for successive approximations, encouragement of parental expression of support and resolution of conflict, introduction of stimulus fading, and assessment of the school situation. The third phase of the treatment consists of resolution of conflict with others (outside of the family as well), and stimulus fading to other relatives, teacher, etc. The fourth, and final phase consists of stimulus fading to the school setting, strengthening of changes within the family and child, and follow-up evaluation. This article, although not technologically strong, does possess certain aspects that might be replicated. The lack of data fails to offer the reader any real evidence of

how the treatment worked and more importantly, what is to be expected if one wished to replicate the treatment.

The use of pharmacology as a treatment method for selective mutism has only begun to be tested empirically within the last decade, beginning with a case presented by Golwyn and Weinstock (1990). According to the authors, psychotherapy was initially implemented as the treatment method of choice, however after the treatment met with little success, phenazine (an anti-anxiety medication) was used, and subsequently, the disorder was treated successfully. Similarly, all of the articles that have followed Golwyn and Weinstock (1990) have reported that the administration of psychotropic medications were considered only after all of the previous treatment attempts had failed (Black & Uhde, 1992; Black & Uhde, 1994, Dummit, Klein, Tancer, Asche & Martin, 1996; Golwyn & Weinstock, 1990; Lafferty & Constanino, 1998; Rupp, 1999; Wright & Cuccaro, 1995).

Black and Uhde (1994) presented a study in which the effectiveness of fluoxetine was experimentally tested by comparing one group of individuals with selective mutism that received fluoxetine (experimental group), with another group that did not (control group). If patients improved within the first phase of treatment, then they were not placed in either group, and thus subsequently dropped from the study. The participants that did not improve within the first phase were then assigned (randomly) to either group respectively. Treatment effects were assessed using subjective ratings by the clinicians, teachers, and parents. According to the authors, parents rated the fluoxetine-treated participants as significantly more improved than the control group, however teachers, clinicians, and even the participants themselves reported no significant difference

between the groups. The authors reported that there was an improvement in some of the other assessment measures across pre and post assessment of the two groups respectively, however those improvements were not statistically significant.

Medications such as the ones previously mentioned and others- citalopram (Thomsen, Rasmussen, & Andersson, 1999), nontricyclic antidepressants (Emslie, Walkup, Pliszka, & Ernst, 1999), phenazine (Golwyn, & Sevlie, 1999), sertraline (Carlson, Kratochwill, & Johnston, 1999), fluvoximine (Lafferty, & Constantino, 1998) should be considered for treatment based on two criteria: 1) other treatments attempts have failed (Dummit, Klein, Tancer, Asche & Martin, 1996) and 2) the individual has also been diagnosed with social phobia, anxiety disorder, obsessive compulsive disorder, or some other form of psychosis under which those medications are appropriate.

Another relatively new treatment approach to selective mutism, and often times much faster, is the use of audio and video feedback for self-modeling, desensitization, and shaping (Albert-Stewart, 1986; Blum & Kell, 1998; Ciottone & Madonna, 1984; Kehle, Owen & Cressy, 1990; Kehle, Madaus, Baratta & Bray, 1998; Pigott & Gonzales, 1987). Treatment success was reported in all of these articles, and was reported as either an increase in verbalizations, increase in volume, or an increase in engaging in more social interactions. The average length of treatment for the reported cases was 4.1 weeks, and the improvements had maintained at the time of follow-up, five months later (Kehle, Owen & Cressy, 1990; Kehle, Madaus, Baratta & Bray, 1998).

Albert-Stewart (1986) presented a case in which a device that measured decibels was used to shape an increase in the volume of the participant's verbalizations. As the participant's verbalizations increased in volume, the author would reinforce the

appropriate successive approximations with praise and a point, which could be exchanged at the “toy closet”. Self-modeling is a procedure that involves videotaping the client answering a series of questions that have been asked by someone whom the child will talk to, and also videotaping the target individual (i.e., teacher) whom the client does not normally talk to and editing the two video sessions together so that it appears as though the client is answering the target individual directly (Kehle, Madaus, Baratta & Bray, 1998; Kehle, Owen & Cressy, 1990; Pigott & Gonzales, 1987). The major problem that most people will have in trying to replicate these treatments is obtaining the appropriate equipment, which can be costly. Another problem for some people may be, not knowing how to edit the video sessions. This service can be purchased, however this too can be costly. The obvious benefit of these treatments is the “quick fix” nature of them. However, since the reported length of treatment is contradictory to what has been documented in other treatments for selective mutism, the reader when analyzing each case respectively should use caution.

In contrast to the potential financial problems that the previously mentioned treatments may present, a much more inexpensive treatment approach, albeit more time consuming, is systematic desensitization, or in vivo exposure (Bozigar & Hansen, 1984; Croghan & Craven, 1982; Rasbury, 1974; Rye & Ullman, 1999; Scott, 1977; Watson, 1995). In the study presented by Croghan and Craven (1982), the authors used an in vivo desensitization program in which the client was allowed to work alone with a teacher and then gradually over time more people would be added to the work area. The client was reinforced for any form of verbalization and also avoided losing certain reinforcers (i.e., field trips) by verbalizing. The treatment failed and subsequently the authors had to

change the treatment. The authors developed a much more operationalized desensitization program using a hierarchy of anxiety-related speech situations (e.g., talking to teacher without students present, talking to teacher with students present) along with techniques for relaxation. In addition to the changes with the desensitization program, the avoidance contingencies were discontinued due to their ineffectiveness.

Similar to the modality of the desensitization programs is the behavioral treatment of stimulus fading (Conrad, Delk, & Williams, 1974; Richards & Hansen, 1978; Sluckin & Foreman, 1991; Wulbert, Nyman, Snow, & Owen; 1973). Whereas desensitization involves the use of introducing new situations and settings and practicing those situations at a graduated pace until the client is comfortable, stimulus fading involves the transfer of stimulus control from individuals and settings in which the client verbalizes, to individuals and settings in which the client does not verbalize. Conrad and colleagues (1974) presented a case in which twelve sessions were divided into six different stages, the first beginning in the home with the mother and therapist, and the last stage was conducted at the school with the teacher and classmates present.

Similarly, in what is probably the most technological and empirically sound research article presented in the selective mutism literature, Wulbert and colleagues (1973) took an experimental approach towards objectively testing whether stimulus fading was a necessary condition to instate verbal behavior with a stranger. The authors used two alternating conditions. In the first condition, the client received reinforcement for responding in the presence of someone who already had stimulus control while a stranger was slowly faded into stimulus control. In the second condition, the same method was followed, however no fading procedures were used. In addition to the two

alternating conditions, a contingency management system (timeout) was used if the child did not respond when prompted. According to the authors, the first condition was more effective than the second condition in the transfer of stimulus control. The differing effects of the contingency management system were due to the use of the stimulus fading procedures in one condition and absence of those procedures in the other condition.

In addition to stimulus fading, other behavioral treatments such as shaping (Giddan, Ross, Sechler, & Becker, 1997; Lazarus, Gavilo, & Moore, 1983; Pecukonis & Pecukonis, 1991; Powell & Dalley, 1995), contingency management (Porjes, 1992), reinforcement (Morin, Ladouceur, & Cloutier, 1982), and group contingency management (Brown & Doll, 1988) have been reported in the literature.

Giddan and colleagues (1997) presented a study that, in addition to using an escape contingency, used shaping as the primary treatment modal. The escape contingency was used initially to evoke a singular response from the child, and once the child responded, she could escape from the aversive setting and go home. The shaping procedures were well designed in that the client went from writing messages, to whispering, to a louder whisper, to soft voice, to full voice. Similarly, Powell and Dalley (1995) presented a case in which they used extinction of non-verbal behaviors, shaping of successive approximations, and self-modeling using an audio-recorder. The difference between these two studies is that Powell and Dalley (1995) decided to discontinue the use of the self-modeling procedure because it was causing the client to be distressed. Giddan and colleagues (1997) reported that the individual “became very sad, sat curled up in a ball in near the door, sobbed, and hid under a chair.” The authors continued the use of aversive contingencies in the intervention, and ultimately were successful in doing so.

There are a number of problems and concerns with using escape contingencies, such as the one previously discussed and others like it (Krohn, Weckstein & Wright, 1992; Lysne, 1995; van der Kooy & Webster, 1975; Williamson, Sanders, Sewell, Haney & White, 1977). It should be understood by those who work with individuals with selective mutism that this is a disorder, and as such the non-verbal communicative behaviors are not the results of “stubbornness” or “defiance” manifested, but rather the result of the individual’s inability to speak in select environments. It is cause for concern when behavioral procedures are used counterproductively in order to match the perceived defiance of the client. Behavioral procedures should not be used in order to coerce an individual to engage in behaviors that he or she is unable to engage in. Instead, behavioral procedures should be used in order to manipulate the environment so that the probability that the individual will engage in the appropriate behaviors will be increased. Furthermore, if the escape contingency fails, then the procedure may actually reinforce the resistance to speak (Lysne, 1995).

Group treatment approaches, which focus primarily on changing the behaviors of those who are present when the mutism occurs, are not common within the selective mutism literature (Brown & Doll, 1988). The group contingency system that was investigated by Brown and Doll (1988) is similar to peer-mediated or peer-directed treatment approaches (Odom & Strain, 1984; Osnes, Guevremont & Stokes, 1986; Osnes, Guevremont, & Stokes, 1987; Sandler, Arnold, Gable, & Strain, 1987; Sisson, Van Hasselt, Hersen, & Strain, 1985; Stokes, Doud, Rowbury, & Baer, 1978; Strain, Kerr, & Ragland, 1979; Strain, Shores, & Timm, 1977). In their study, Brown and Doll (1988) provided reinforcement to the client whenever she spoke to other students in her class.



They also provided reinforcement to the students that the client spoke to. Prior to recess the class was reminded of the contingencies, however no more instruction was given after the reminder. The results indicated that the number of verbalizations increased, as well as the number of people with whom she communicated. Also, the client's fellow classmates increased their number of interactions with her, and continually prompted her to talk.

Although it has been documented that most children with selective mutism eventually overcome the disorder, it is uncertain how much of an effect the disorder has on the child's social skills or more importantly the child's social life (Ciottono & Madonna, 1984; Dow, Sonies, Scheib, Moss, & Leonard, 1995; Dummit, Klein, Tancer, Asche, Martin, & Fairbanks, 1997; Kolvin, & Fundudis, 1981). The importance of social interactions and possessing adequate social skills is well documented within the literature (Bandura, 1977; Gainotti, 1997; Meisels, Atkins-Burnett & Nicholson, 1996; Murphy & Vincent, 1989; Peterson & McConnell, 1993). According to Meisels and colleagues (1996), children that rank highly in social competence and social skills will have more success in academics, school adjustment, using peers as resources, displaying appropriate affection, possessing leadership capabilities, and possessing moderately high self-esteem. Based on these theories, it is possible that the effects that selective mutism may have on a child could result in poor social skills development, and subsequently a poor social life. Therefore, in order to avoid this effect the selective mutism would have to be resolved at a younger age, and not left to the child to resolve on his/her own.

The rationale for the present study consisted of a two part developmental process. The first part occurred after the review of the literature, in which it was noted that there

were no articles that focused on the interactions of children with selective mutism and their teachers. More specifically, there were no articles that identified the teachers as potential variables for the maintenance or treatment of selective mutism. Since selective mutism occurs largely in the school setting, and the teachers play a major part within that environment, it seemed essential to focus on them to identify what effects, if any, they may have of the child with selective mutism's behaviors. In this study, we hoped to address this vacancy in the literature and explore the role of the teacher in the treatment of selective mutism.

The second part of development occurred after the authors conducted two formal training seminars with the teachers of a child with selective mutism. The seminars were conducted for the same child but during different school years and with different teachers. The first seminar took place within the first month of the child's 5<sup>th</sup> grade year, and the second seminar took place prior to the beginning of his 6<sup>th</sup> grade year. The purpose of the seminars was to inform the teachers about selective mutism so they would be understanding and sympathetic to the child's situation and have ideas of how to deal with him.

During both seminars the teachers were presented with information on the disorder, such as a brief literature review and suggested ways to interact with the child. Also, the parent of the child provided the teachers with a description of how the child behaved outside of the school setting, giving them a better understanding of his personality. After both seminars concluded, the teachers reported that the information that was provided was extremely helpful. Both sets of teachers reported that they had dealt with one or more children in the past who were either very shy or possibly

selectively mute. However they were not sure how to interact with them and always felt very uncomfortable around them.

After completion of the seminars, one of the trainers visited the school intermittently to observe the teacher/child interactions and provide the teachers with feedback, if necessary. The purpose of the present study was to replicate a variation of these training seminars to assess the effects of the instructions on the teachers' behaviors. The literature on effective training procedures was reviewed for the purpose of developing an empirically sound training program (Brown, 2002; Fox, 1993; Hewitt, 1998; Knoff, Curtis, & Batsche, 1997; McConville, Hantula, & Axelrod, 1998).

Based on the empirical research, the following characteristics and tools were identified for an effective training program: 1) Identify the teacher's baseline knowledge of selective mutism using a pre-test, 2) Provide different examples of incidents that have had effects on children with selective mutism, 3) Discuss relevant research that pertains to selective mutism, 4) Provide the teachers with the necessary skills for dealing with a child with selective mutism, 5) Conduct role-playing scenarios to practice the newly learned skills, 6) Provide feedback for the teachers, 7) Identify the effects of the training by using a post-test, and 8) After completion of the training, monitor the teacher's behaviors individually, and provide them with feedback if necessary.

The hypothesis for the present study was that teachers have an effect on the maintenance of selective mutism because they are not interacting with the children with SM as much as other children in the classroom, and when they do interact they do not place any verbal expectations on the child. By implementing the teacher training, the researcher's goal was to bring this deficiency to the teachers' attention, and provide them

with different strategies for interacting with the child. The study sought to identify what effects the training would have on the teachers' behaviors and whether these changes would affect the child with SM.

## Chapter Two

### Method

#### Setting and Participants

A 12-year old male with selective mutism (SM), also known as S1 and 4 of his teachers (T1, T2, T3, and T4) participated in the present study. Three of the teachers, T1, T2, and T4 are female and T3 is male. The schedule for S1's day was as follows; T3's class followed by Band 1 and Band 2, then T4's class, then lunch followed by T1's class and then T2's class. Initially, one teacher was designated as the control (T3), and the other three teachers (T1, T2, and T4) were to receive the training. However due to personal reasons, T4 left the school and did not return for the remainder of the year. This resulted in T3 being trained, and T4 becoming the control. The settings were the four teachers' classrooms at S1's school. All of the classes were regular education classes.

#### Design

A multiple baseline design across subjects was used to compare the effects of the training on the teachers, and a multiple baseline design across settings was used to compare the behaviors of the child with SM in the different classrooms. Baseline data was collected on each of the participants prior to the implementation of the intervention in order to provide a comparison for post-intervention effects. The teacher who was initially designated as the control (T3) was monitored on an intermittent basis throughout baseline and was trained toward the end of the observation sessions. T4 was monitored continuously until she left.

## Instruments

A data collection sheet (Appendix A) was designed to record the dependent variables of both the child with SM and his teachers. The data collection sheet is described in detail in the procedure section. An observation code was developed, which provided the observers with operational definitions of the dependent measures (Appendix B). Each observer used a pencil or a pen to record the behaviors of the participants. Both the primary observer and the reliability observer used watches to identify the inter-response time (IRT), or time in between the questions. A pre-test was completed by the teachers prior to the implementation of the intervention in order to assess their baseline knowledge of SM and how to deal with children with SM. A post-test was completed by the teachers to assess their knowledge of the disorder and ways to deal with children with SM, after the intervention had been implemented.

## Dependent Measures

The dependent measures are defined in detail in the observation code (Appendix B). For the teachers the dependent measures were: (1) frequency of yes/no questions for the child with SM, (2) frequency of open-ended questions for the child with SM, (3) Inter-response time (IRT) of the questions, or the time that elapsed between the questions for the child with SM, (4) frequency of volunteer requests that required a verbal response, (5) frequency of volunteer requests that required a non-verbal response, (6) frequency of yes/no questions addressed to the class, (7) frequency of open-ended questions addressed to the class, (8) pre/post-test.

For the child with SM the dependent measures were: (1) frequency of verbal responses to the teacher's questions, (2) frequency of non-verbal responses to the

teacher's questions, (3) frequency of volunteered tasks that required a verbal response, and (4) frequency of volunteered tasks that required a non-verbal response.

### Observer Training

Observers were given the observation code prior to recording any data. Practice sessions were conducted in an analog setting so that the observers could become acclimated to recording the dependent measures under similar conditions that would be present during the actual observation sessions. The practice sessions also aided the observers in assessing, which dependent measures were observed reliably, and which ones were not. The primary researcher served as the primary observer and another observer, who has experience conducting direct observations, served as the reliability observer. Data collection began after the observers obtained the appropriate level of reliability for the dependent measures (approximately 80%).

### Procedures

Baseline. Participants were observed in the school during regularly scheduled classes until the data were stable. Stability was determined by the lack of variability between data points; specifically, the final three data points prior to the intervention were not increasing or decreasing in trend. The intervention was not implemented until at least three data points were collected for each of the dependent measures. Each observation session took place during the allotted class time. The duration of each class period was identical. Sessions were the same for baseline and post-treatment observations.

Data sheets. The data collection sheets consisted of two separate tables, one for the teacher and one for the child with SM. Within each of the tables were four separate rows, each of which contained a different dependent variable. The fifth observable

dependent variable for the teachers, IRT (inter-response time), was in a separate table that contained 15 separate rows for up to 15 possible questions that might have been asked by the teachers with an IRT of 1-15 seconds between each question.

Data collection. The procedures for recording the data during the observation sessions were as follows: (1) the observers sat approximately 5 feet apart from one another, (2) each observer recorded the behaviors of both the child with SM and the teacher, (3) for the dependent variables in which frequency was monitored, the observers made a single mark for each behavior as it occurred, and (4) for IRT the observers counted the seconds using a stopwatch and noted the total seconds that elapsed between questions by circling the appropriate number in the appropriate row.

Training. The training was preceded by the administration of a pre-test (pp. 67-68 of Appendix C). The teachers were trained separately on different days. The training sessions were approximately one hour, and took place prior to the first observation session for the treatment phase for each teacher; for T1 and T2 this was during their planning time, and for T3 this was before school started.

After the teachers completed the pre-test, the instructor provided them with a brief description of selective mutism and instructions on how to interact with a child with SM (pp. 69-76 of Appendix C). Also, the teachers were instructed on how to respond to the class if they tried to intervene. Although the teachers were instructed to increase their interactions with S1, they were not instructed to decrease their interactions with the rest of the class. Following the instructional part of the training, the instructor answered any questions the teacher may have had to the best of his ability, and they engaged in role-playing exercises to give the teacher practice for dealing with a child with SM (pp. 77-78



of Appendix C). Following the training the teachers completed a post-test (pp. 79-80 of Appendix C).

## Chapter Three

### Results

#### Reliability

Interobserver agreement was calculated for occurrence of behavior. An agreement between observers for occurrence was defined as both observers recording in the identical column and row for the respective behavior. Disagreements were defined as one observer recording an occurrence and the other observer not, for each of the behaviors. Agreement for IRT was defined as both observers circling the same number, representing the amount of time that elapsed between the teacher's questions to S1. Disagreements were defined as observers recording different times for the IRT.

Percentages of interobserver agreements were calculated by dividing the smallest number of occurrences that one observer recorded by the larger number of occurrences that the other observer recorded and multiplying by 100. For example, if the primary observer recorded five open-ended questions made by the teacher to the class and the secondary observer recorded six open-ended questions, then agreement would be calculated by dividing five by six and multiply by 100, resulting in an agreement of 83%. Interobserver agreement was assessed for 30% of the observation sessions throughout the baseline and intervention phases for all of the classrooms. Mean percentages for interobserver agreements for the data concerning teachers are shown in Table 1a. Interobserver agreement for the data for S1 are shown in Table 1b.

Table 1a  
Interobserver Agreement for Teachers' Data

Participant	Y/N for S1	Y/N for Classroom	O/E for S1	O/E for Classroom	VT	NT	Inter-response time (IRT)
T1	92%	83%	100%	91%	100%	66%	81%
T2	92%	80%	100%	90%	100%	N/A*	100%
T3	100%	100%	N/A*	86%	100%	100%	N/A*
Control (T4)	100%	91%	100%	88%	N/A*	N/A*	N/A*
<b>Totals</b>	<b>93%</b>	<b>86%</b>	<b>100%</b>	<b>89%</b>	<b>100%</b>	<b>71%</b>	<b>83%</b>

Y/N= Yes/No Questions; O/E= Open-ended Questions; VT= Verbal Task; NT= Non-verbal Task  
\* Behavior never occurred.

Table 1b  
Interobserver Agreement for S1's Data

Participant	Verbal Responses	Non-Verbal Responses	Verbal Task	Non-verbal Task
T1	N/A*	92%	N/A*	66%
T2	N/A*	91%	N/A*	100%
T3	N/A*	100%	N/A*	100%
Control (T4)	N/A*	100%	N/A*	N/A*
<b>Totals</b>	<b>N/A*</b>	<b>92%</b>	<b>N/A*</b>	<b>75%</b>

\* Behavior never occurred.

Based on the figures in Tables 1a and 1b, the reliability for most of the dependent variables are acceptable, however the reliability for non-verbal tasks initiated by the teachers and non-verbal tasks engaged in by S1 were low. The only explanation for this is that the behaviors were low in frequency, and therefore the opportunities for agreement were low.

#### Tests and Measures Used During the Intervention

Pre-test/Post-test. The pre-test/post-test contained 10 questions total; seven of the questions were true/false, and the other three were open-ended, which required written responses. The questions ranged from inquiring about general information about the disorder, to specifics about how they should respond during a certain situation. The purpose of the tests was to identify how much knowledge the teachers had about the disorder prior to the training, and how much had they learned after the training. The tests also could help identify if any common misconceptions occurred among them. For example, whether they believed that if they left the child alone and did not place any verbal expectations on him, then he would eventually begin speaking because he did not see them as a threat, and would be comfortable in their presence. The pre-test was completed before the training began, and the post-test was completed at the end of the training. The results for the pre-test/post-test are in Table 2.

Table 2  
Test Percentages for Experimental Group for Pre-test/Post-test

Participant	Pre-test	Post-test
T1	60%	100%
T2	60%	100%
T3	70%	100%
<b>Mean Test Scores</b>	<b>63%</b>	<b>100%</b>

One question that presented problems for the teachers during the pre-test was defining selective mutism. Two of out the three teachers defined selective mutism as, “feeling that he/she can’t speak or is choosing not to speak”. Only one teacher defined it correctly, which is interesting because most people assume that the child is choosing not to speak, and it is not until they are told about the disorder that they recognize that there is a psychological obstacle preventing him/her from speaking.

Another question that the teachers had difficulty with during the pre-test was identifying how much time they should allow before they follow-up an open-ended question with an easier yes/no question. All three teachers were unsure how much time to give the child to respond to a question before following it up with another question. One teacher said to give the child 1-2 minutes, while another said to give him 3-5 seconds. Previous direct observations had indicated that 15 seconds would be an adequate amount of time to allow the child to respond before providing the second prompt. Based on the post-test (Table 3) it would appear that training did have an effect on the teachers’ knowledge and understanding of the disorder. Mean scores for the teachers increased from 63% for the pre-test to 100% for the post-test.

#### Visual Analysis of Data

Teacher Questions (Total and Specific). The data collected for the teachers are presented in Figures 1, 2, 4, 5, and 6. The data collected for S1 are presented in Figure 3. Figure 1 summarizes total number of questions asked by the teachers to S1. Figure 2 shows the specific types of questions asked by the teachers to S1- yes/no and open-ended. Figure 3 shows number of responses and tasks engaged in by S1. Figure 4 shows number

of tasks initiated by the teachers with S1. Figure 5 summarizes total number of questions asked by the teachers to the class. Figure 6 shows the specific types of questions asked by the teachers to the class- yes/no and open-ended. All of the figures show the number of times that each of the dependent variables occurred within the observation session on the ordinate with observation sessions on the abscissa.

Visual inspection of the data in Figure 1 indicates that the independent variable did indeed have an effect on the total number of questions that T1, T2, and T3 asked of S1. Furthermore, T4's total number of questions for S1 remained consistent. This corresponds with the data in Figure 3, which indicate that the changes in T1, T2, and T3's behaviors resulted in a change in S1's behaviors (specifically non-verbal responses and non-verbal tasks).

Figure 1, shows a considerable increase in the total number of questions asked by T1. The mean for T1's total questions to S1 increased from 0.5 questions per class during baseline (range= 0-1) to 4.26 questions per class during intervention (range= 2-11). There was also a considerable increase in the total number of questions asked by T2 to S1. The mean for T2's total questions to S1 increased from 0.45 questions per class during baseline (range= 0-2) to 5.23 questions per class during intervention (range= 1-8). For T3, there was a significant increase in the total number of questions asked to S1. The mean for T3's total questions to S1 increased from 0.125 questions per class during baseline (range= 0-1) to 2.8 questions per class during intervention (range= 0-4). However for the control, T4, the data remained low and stable. The mean for total questions T4 asked S1 was 0.54 (range= 0-3), in comparison to 4.09 for the teachers receiving the intervention (range= 0-11).

Figure 2 shows a considerable increase in both yes/no and open-ended questions asked by T1 to S1. The mean for the number of yes/no questions from T1 to S1 increased from 0.5 during baseline (range= 0-1) to 2.36 during intervention (range= 1-9). The mean for the number of open-ended questions from T1 to S1 increased from 0 during baseline (range= 0) to 1.89 during intervention (range= 0-3).

Similarly, in Figure 2 there was a significant increase in the number of yes/no and open-ended questions asked by T2 to S1. The mean for the number of yes/no questions asked by T2 to S1 increased from 0.45 during baseline (range= 0-2) to 2.84 during intervention (range= 1-6). The mean for the number of open-ended questions from T2 to S1 increased from 0 during baseline (range= 0) to 2.38 during intervention (range= 0-4).

For T3, there was a significant increase in the number of yes/no and open-ended questions asked to S1 in Figure 2. The mean for the number of yes/no questions from T3 to S1 increased from 0.125 during baseline (range= 0-1) to 1.4 during intervention (range= 0-2). The mean for the number of open-ended questions from T3 to S1 increased from 0 during baseline (range= 0) to 1.4 during intervention (range= 0-2).

However for the control, T4, the data remained low and stable (Figure 2). The mean for the number of yes/no questions T4 asked S1 was 0.38, in comparison to 2.2 for the experimental group. The mean for the number of open-ended questions T4 asked S1 was 0.15 (range= 0-2), in comparison to 1.89 for the experimental group (range= 0-4).

Figure 4 presents the tasks initiated by T1, and shows a moderate increase from baseline to intervention. The mean for T1's initiations for S1 to engage in a non-verbal task increased from 0.08 during baseline (range= 0-1) to 0.42 during intervention (range=

0-3). The mean for T1's initiations for S1 to engage in a verbal task increased from 0 during baseline (range= 0) to 0.05 during intervention (range= 0-1).

There was a minimal increase in the number of non-verbal tasks that T2 initiated with S1 displayed in Figure 4. The mean for T2's initiations for S1 to engage in a non-verbal task increased from 0.18 during baseline (range= 0-1) to 0.31 during intervention (range= 0-1). The means for T2's initiations for S1 to engage in a verbal task increased from 0 during baseline (range= 0) to 0.08 during intervention (range= 0-1).

Figure 4 shows that there was no difference between baseline and intervention for tasks initiated by T3. The mean for T3's initiations for S1 to engage in a non-verbal task decreased from 0.125 during baseline (range= 0-1) to 0 during intervention (range= 0). The mean for T3's initiations for S1 to engage in a verbal task decreased from 0.125 during baseline (range= 0-1) to 0 during intervention (range= 0).

Similarly, for T4 the data remained consistent at 0 initiations with the exception of the first observation session, in which there was one initiated task. The minimal change for T1 and T2 with regard to task initiation indicates that the training had little effect on those dependent variables for the experimental group; and the lack of change for T3 across baseline and intervention for non-verbal and verbal task initiations is an indication that the training did not have an effect on those dependent variables for that participant.

Figure 5 presents the total number of questions T1 asked the class and shows a decrease from baseline to intervention. The mean for T1's total questions to the class decreased from 19.83 questions per class during baseline (range= 17-26) to 9.84 questions per class during intervention (range= 1-20). There is no significant difference



between baseline and intervention for T2's total number of questions to the class. The mean for the total number of questions T2 asked the class decreased from 9.18 questions per class during baseline (range= 0-13) to 8 questions per class during intervention (range= 4-19). There is a decrease between baseline and intervention in total number of questions T3 asked the class. The mean for T3's total questions to the class decreased from 13 questions per class during baseline (range= 7-19) to 5 questions per class during intervention (range= 0-11). For the control, T4, the data were stable throughout the observation sessions. The mean for the total number of questions T4 asked the class was 18.4 (range= 8-39), in comparison to 7.61 for the experimental group during intervention (range= 0-20).

The reasons for the decreases in T1's and T3's questions to the class appear to be context driven and not as a result of the intervention. For T1, observation sessions 14 through 23 consisted of the class reading silently for 45 of the 60 minutes of the class period. For T3, observation session 21 was taken up predominately by quiet study time. T3 had limited interactions with the class during this time, although he still managed to interact with S1. Also, on observation session 24 the class watched a video, and the teacher did not interact with them at all.

Figure 6 shows the number of specific question (yes/no and open-ended) asked by T1 to the class, decreasing from baseline to intervention. The mean for the number of yes/no questions from T1 to the class decreased from 5.5 during baseline (range= 2-10) to 3.68 during intervention (range= 1-7). The mean for the number of open-ended questions from T1 to the class decreased from 12.75 during baseline (range= 12-16) to 6.15 during intervention (range= 0-14).

For T2, there was no significant difference between baseline and intervention for the number of specific questions asked to the class. The mean for the number of yes/no questions from T2 to the class decreased from 3 during baseline (range= 0-5) to 2 during intervention (range= 0-5). The mean for the number of open-ended questions from T2 to the class increased from 5.44 during baseline (range= 0-10) to 5.92 during intervention (range= 3-14).

For T3, there was a decrease in the number of specific questions asked by T3 to the class. The mean for the number of yes/no questions from T3 to the class decreased from 3.71 during baseline (range= 3-5) to 2 during intervention (range= 0-4). The mean for the number of open-ended questions from T3 to the class increased from 8.43 during baseline (range= 4-14) to 3 during intervention (range= 0-7).

For the control, T4, the data for yes/no questions to the class stayed relatively stable throughout the observation sessions. The data for open-ended questions to the class fluctuated, yet the trend was a gradual decline throughout the observation sessions. The mean for yes/no questions to the class asked by T4 was 4.38 (range= 2-17), in comparison to 2.56 for the experimental group (range= 0-7). The mean for open-ended questions to the class asked by T4 was 14.07 (range= 6-25), in comparison to 5.02 for the experimental group (range= 0-14).

S1's Responses. Based on the data in Figure 3, S1's responses to T1 changed significantly from baseline to intervention. The mean for S1's non-verbal responses to T1 increased from 0.5 during baseline (range= 0-2) to 3.26 responses during intervention (range= 2-9). There were no occurrences of verbal responses in either phase. The mean for S1's engagement in non-verbal tasks initiated by T1 increased from 0.17 during

baseline (range= 0-1) to 0.57 tasks during intervention (range= 2-9). S1 did not engage in any verbal tasks in either phase.

Based on the data in Figure 3, S1's responses to T2 changed significantly from baseline to intervention. The mean for S1's non-verbal responses to T2 increased from 0.45 during baseline (range= 0-2) to 3.69 responses during intervention (range= 1-5). There were no occurrences of verbal responses in either phase. The mean for S1's engagement in non-verbal tasks initiated by T2 increased from 0.18 during baseline (range= 0-1) to 0.38 tasks during intervention (range= 0-1). S1 did not engage in any verbal tasks in either phase.

Based on the data in Figure 3, S1's responses to T3 changed significantly from baseline to intervention. The mean for S1's non-verbal responses to T3 increased from 0.125 during baseline (range= 0-1) to 2 responses during intervention (range= 0-4). There were no occurrences of verbal responses in either phase. The mean for S1's engagement in non-verbal tasks initiated by T3 decreased from 0.125 during baseline (range= 0-1) to 0 tasks during intervention (range= 0). S1 did not engage in any verbal tasks in either phase.

The percentage of questions answered by S1 for each of the teachers was calculated to examine the differences between baseline and intervention phases. For T1, S1 responded to 100% of her questions during baseline and 77% during intervention. For T2, S1 responded to 80% of her questions during baseline and 69% during intervention. For T3, S1 responded to 100% of his questions during baseline and 71% during intervention. For the control, T4, S1 responded to 85% of her questions during the observation sessions. The reason for these decreases in percentages is due to the increase

in open-ended questions being asked of S1 during the intervention. S1 responds more frequently to yes/no questions, which consequently, were the only questions asked by T1, T2, and T3 during baseline, thus the high percentage of responses per questions.

The differences between the mean for the control and the mean for the experimental group for S1's non-verbal responses and non-verbal tasks were significant. The mean for non-verbal responses S1 engaged in with the T4 was 0.46 (range= 0-2), in comparison to 2.99 for the experimental group (range= 0-9). The mean for non-verbal tasks S1 engaged in with T4 was 0.07 (range= 0-1), in comparison to 0.32 for the experimental group (range= 0-3).

#### Statistical Analyses

Further statistical analyses were conducted in order to confirm the significance of observed results. The equivalence of questioning frequency of the four teachers during baseline was tested using the Kruskal-Wallis non-parametric one-way ANOVA for independent groups (Table 3). The means for the control (Teacher 4) were then tested for significant difference from the treatment group (Teachers 1, 2, and 3) after intervention using a Mann-Whitney U test, an unmatched non-parametric T-test for ordinal data (Table 4). A Mann-Whitney U test was also used to test the significance of observed differences between baseline and treatment for each of the teachers receiving the intervention (Table 5).

Table 3  
Across Teachers

	T1 mean (Range)	T2 mean (Range)	T3 mean (Range)	T4 mean (Range)	Significance of difference among teachers at baseline
S1 yes/no	0.50 (0-1)	0.45 (0-2)	0.13 (0-1)	0.38 (0-1)	p= .504
S1 open-ended	0.00	0.00	0.00	0.15 (0-2)	p= .589
Class yes/no	5.50 (2-10)	3.00 (0-5)	3.71 (3-4)	4.38 (2-17)	p= .320
Class open- ended	12.75 (12-16)	5.44 (0-10)	8.43 (4-14)	14.07 (6-25)	p= .001 **

\* significant at  $\alpha = 0.05$ ; \*\* significant at  $\alpha = 0.01$

Table 4  
Between Control and Experimental Group

	Mean of control (Range)	Mean of treatment group after intervention (Range)	Significance of difference between control and treatment group
S1 yes/no	0.38 (0-1)	2.20 (0-9)	p< .001 **
S1 open-ended	0.15 (0-2)	1.89 (0-4)	p< .001 **
Class yes/no	4.38 (2-17)	2.56 (0-7)	p= .012 *
Class open- ended	14.07 (6-25)	5.02 (0-14)	p< .001 **

\* significant at  $\alpha = 0.05$ ; \*\* significant at  $\alpha = 0.01$

Table 5  
Within Teacher Baseline-Intervention Comparison

	T1			T2			T3		
	Baseline	Intervention	Sig.	Baseline	Intervention	Sig.	Baseline	Intervention	Sig.
S1 yes/no	0.50	2.36	p= .001**	0.45	2.84	p< .001**	0.13	1.4	p= .012 *
S1 open-ended	0.00	1.89	p< .001**	0.00	2.38	p< .001**	0.00	1.40	p= .004**
Class yes/no	5.50	3.68	p= .508	3.00	2.00	p= .087	3.71	2.00	p= .053
Class open-ended	12.75	6.15	p= .003**	5.44	5.92	p= .813	8.43	3.00	p= .022*

\* significant at  $\alpha = 0.05$ ; \*\* significant at  $\alpha = 0.01$

### Inter-response Time (IRT)

The mean IRT, or average time that elapsed between questions could not be analyzed across baseline and intervention phases because the teachers did not allow any time to elapse between their questions to S1 during Baseline. In other words, the teachers would ask S1 a question, usually yes/no and if he did not respond immediately, they would ask another question. Therefore, two results occurred from their questions during baseline, either S1 would answer the teacher and he/she did not follow up with another question (no IRT), or the teacher would ask question after question, with no delay between them, until S1 replied (no IRT). During the intervention however, the teachers were instructed to wait 15 seconds for S1 to respond and then. Then, if necessary, follow up the unanswered question (usually open-ended) with an easier question (yes/no). The mean IRT for T1 during intervention was 13.2 seconds (range= 3-13). The mean IRT for T3 during intervention was 11.5 seconds (range= 8-14). The mean IRT for T2 during the intervention was 8.4 seconds (range= 5-11).

### Anecdotal Observations

Some interesting occurrences took place during the intervention phase were when the teachers' asked S1 a question and one or two of his classmates answered for him. The teachers would ask S1 an open-ended question and another student, usually one of S1's friends, would almost immediately respond and answer the question for him. The teachers quickly notified the intervening child, or in some cases children, that S1 could answer the question and they should let him try. In the past the primary researcher has observed other children being very protective of a child with SM, however not to this degree. What makes the circumstances so interesting is that the children did not know if,

let alone when, the teacher was going to ask S1 a question, and yet they answered as if they were asked the question; allowing at most 2 seconds to elapse before responding.

Another interesting event occurred on the day that S1 completed a video presentation in T1's class (oral video presentation). S1 appeared extremely anxious before the presentation because the rest of the class was going to see and hear him speak. Prior to the video presentation, which was not the first one that S1 has done, some of his classmates were looking at him and whispering excitedly. A few of the students said some words of encouragement like, "You'll do great" or "Don't worry." When the video started the kids were looking at the video and looking at S1, oscillating back and forth. However, as the video presentation went on, the novelty of it must have worn off because the students started sighing, and groaning, and saying, "When is this over?" For the entire duration of the presentation, S1 has his head in his hands and was playing with his hair. He did not look up until the video ended and the class clapped. He was smiling for the next five minutes and even volunteered to help the next student set up his presentation.

That evening the primary researcher called S1 to congratulate him on a job well done and to talk with him about what he was thinking about before, during, and after the presentation. S1 said that he was really nervous about doing the presentation, but he knew that he had to because he did not want an "F". At home, the days that led up to the presentation were stressful on the entire family because S1 was short tempered and easily agitated. This has been a reoccurring theme over the years. Whenever the mutism becomes the focal point, S1 becomes emotional and verbally aggressive. He said that during the presentation he wanted to leave. The primary researcher asked him if he heard



what the other students said, the words of encouragement, and he said, “Yeah”. He said that made him feel good, more comfortable. After it was over he said he was relieved and very happy. The primary researcher asked him what was the one thing that made him more nervous than anything else, and S1 replied, “I don’t know”. The primary researcher then asked if it was other people hearing and seeing him speak and he said, “Yes”. Finally, S1 was asked whether the students or teacher made him more “nervous”. After dodging the question for a while, S1 finally answered, “the students”. This topic is explored further in the discussion section.

Figure 1. Teachers' Total Questions to S1 in Class

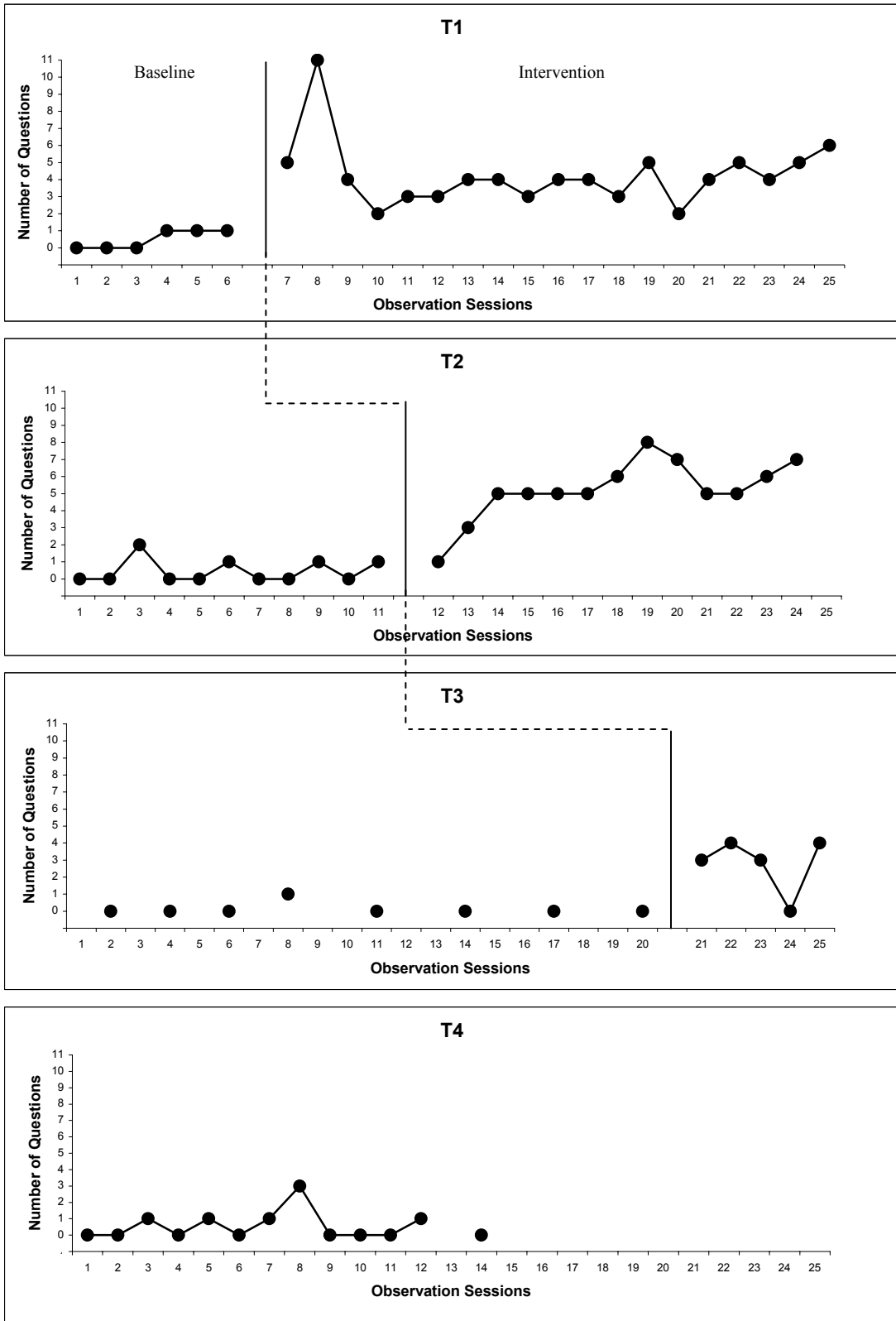


Figure 2. Teachers' Questions (by Type) to S1 in Class

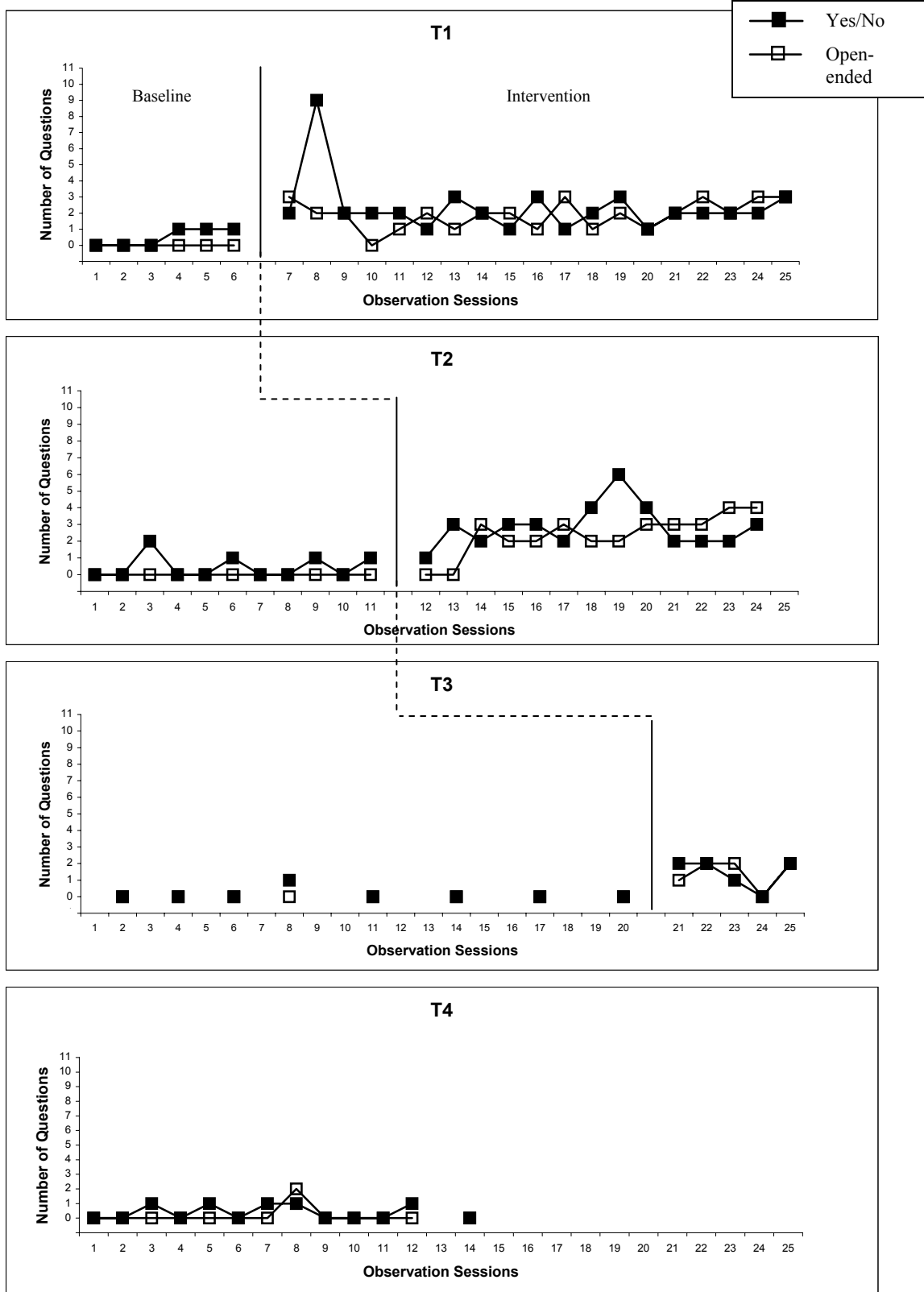


Figure 3. S1's Responses to Teachers' Questions and Task Requests

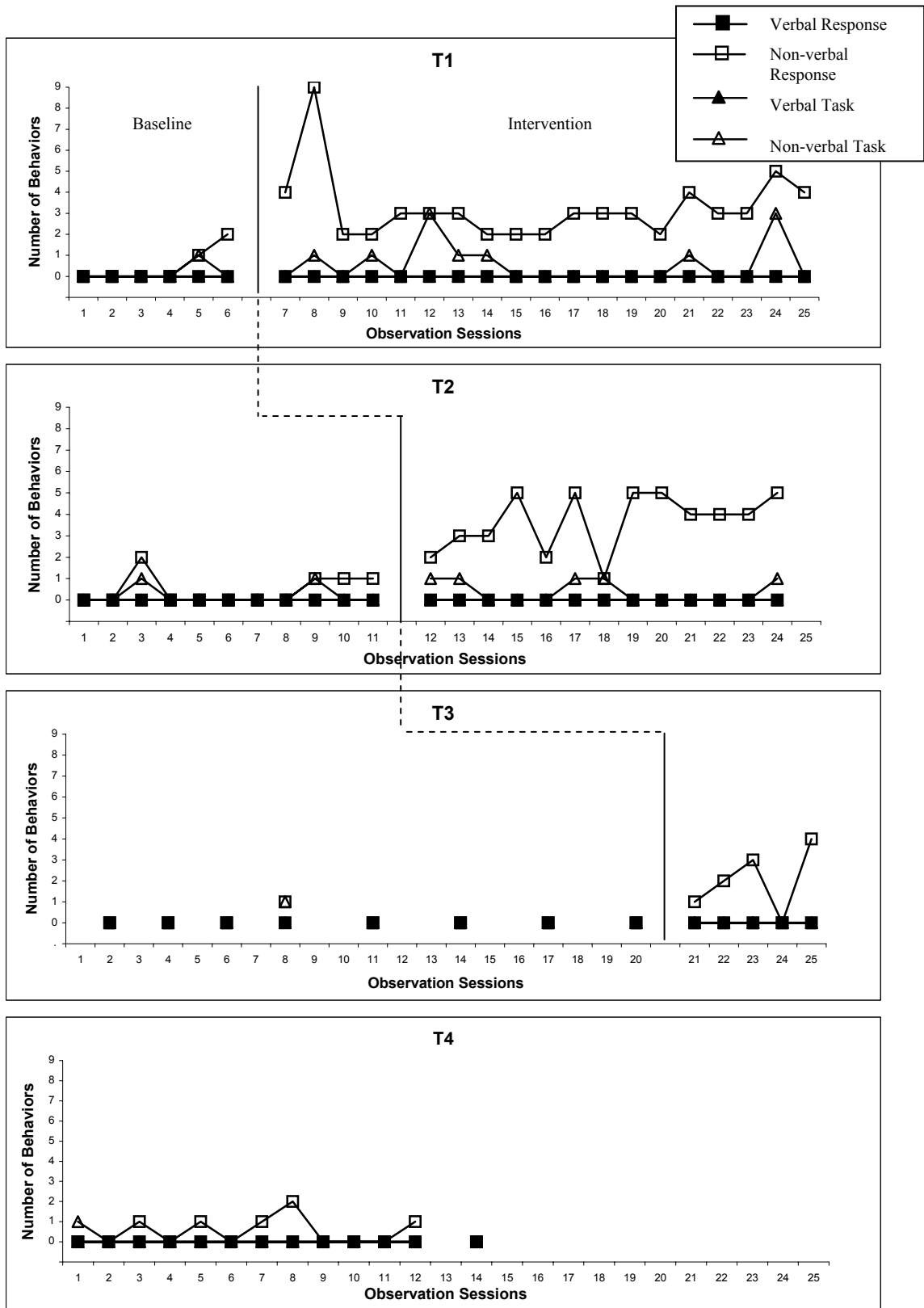


Figure 4. Teachers' Verbal and Non-verbal Task Requests of S1

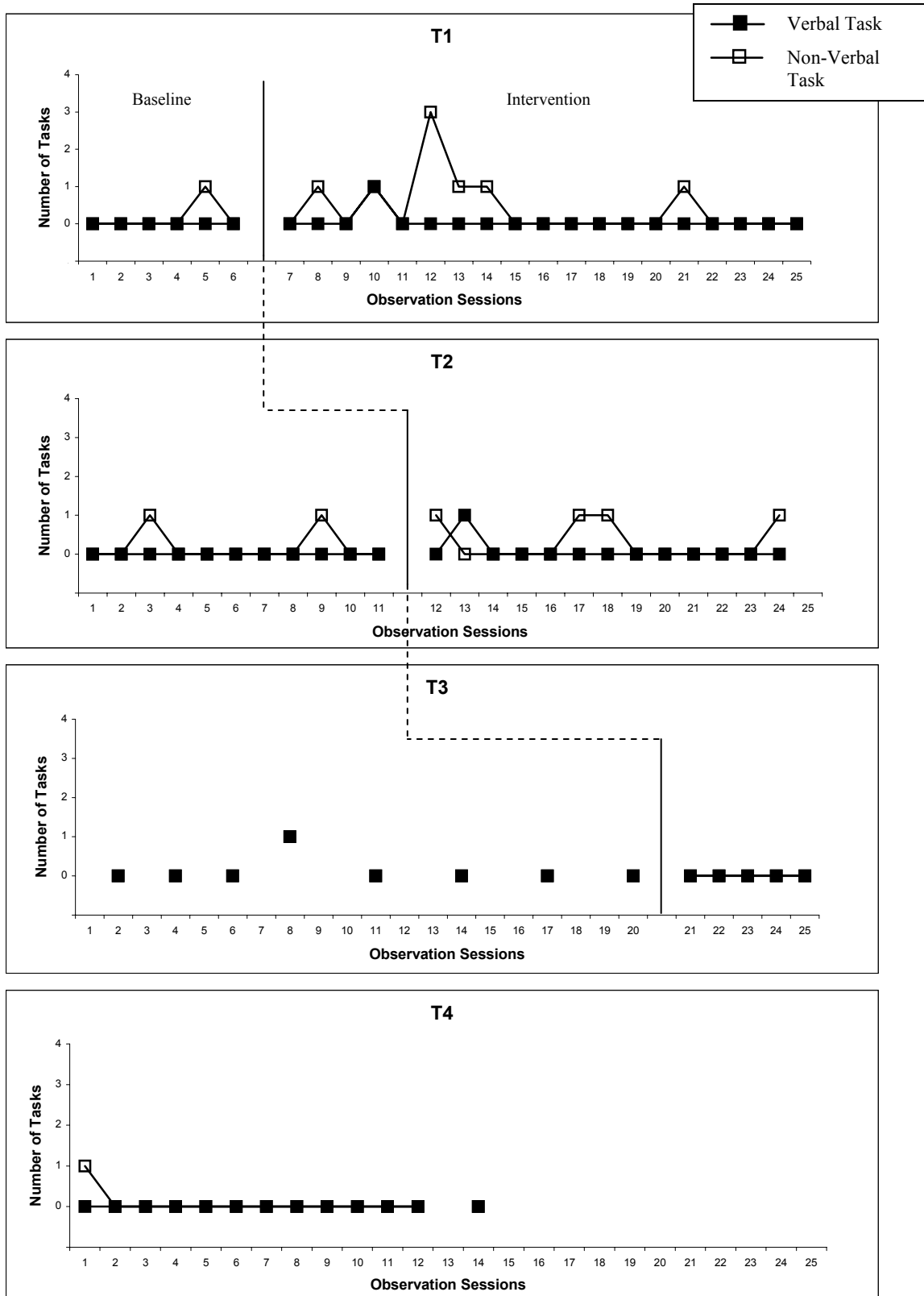


Figure 5. Teachers' Total Questions to Everyone in Class

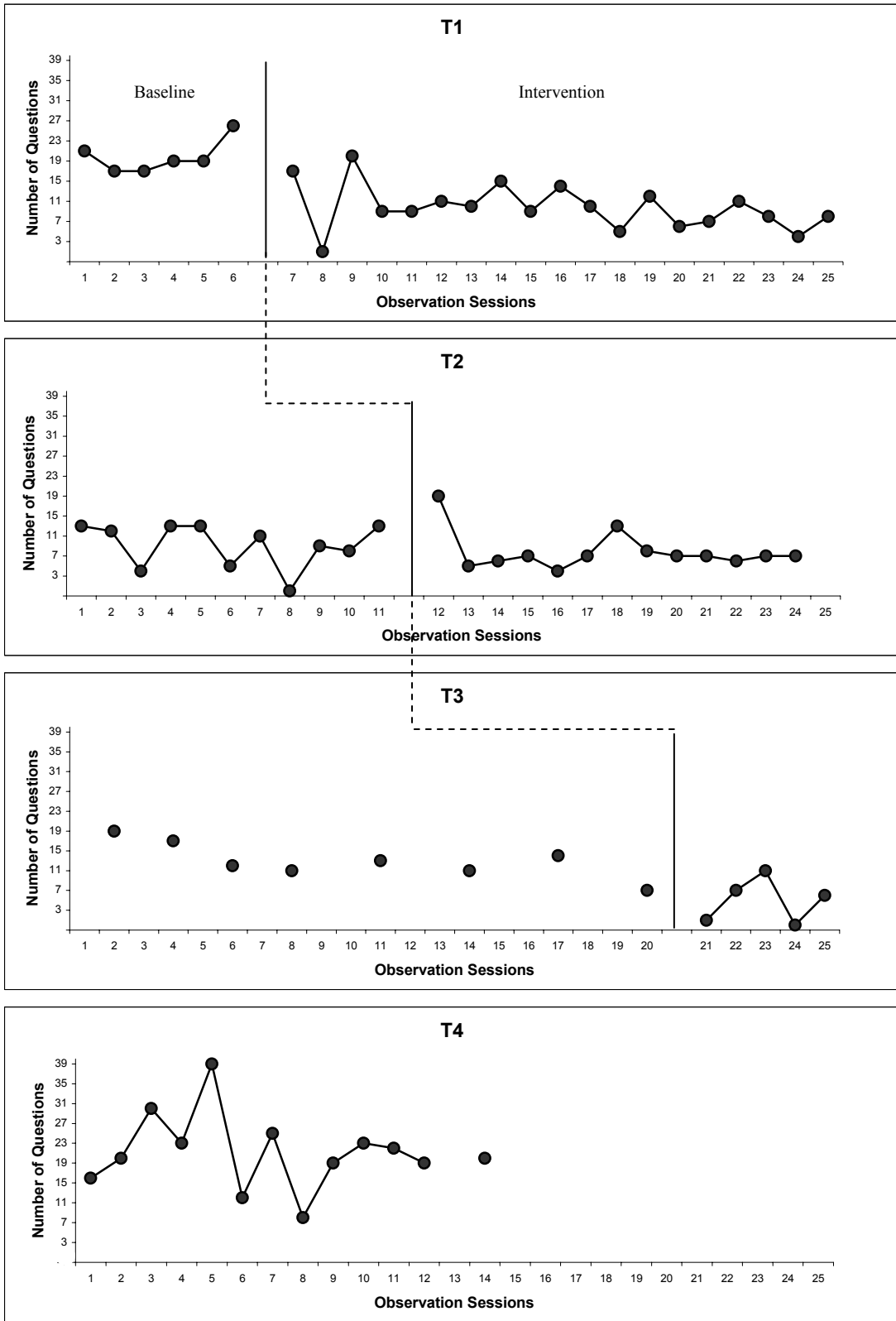
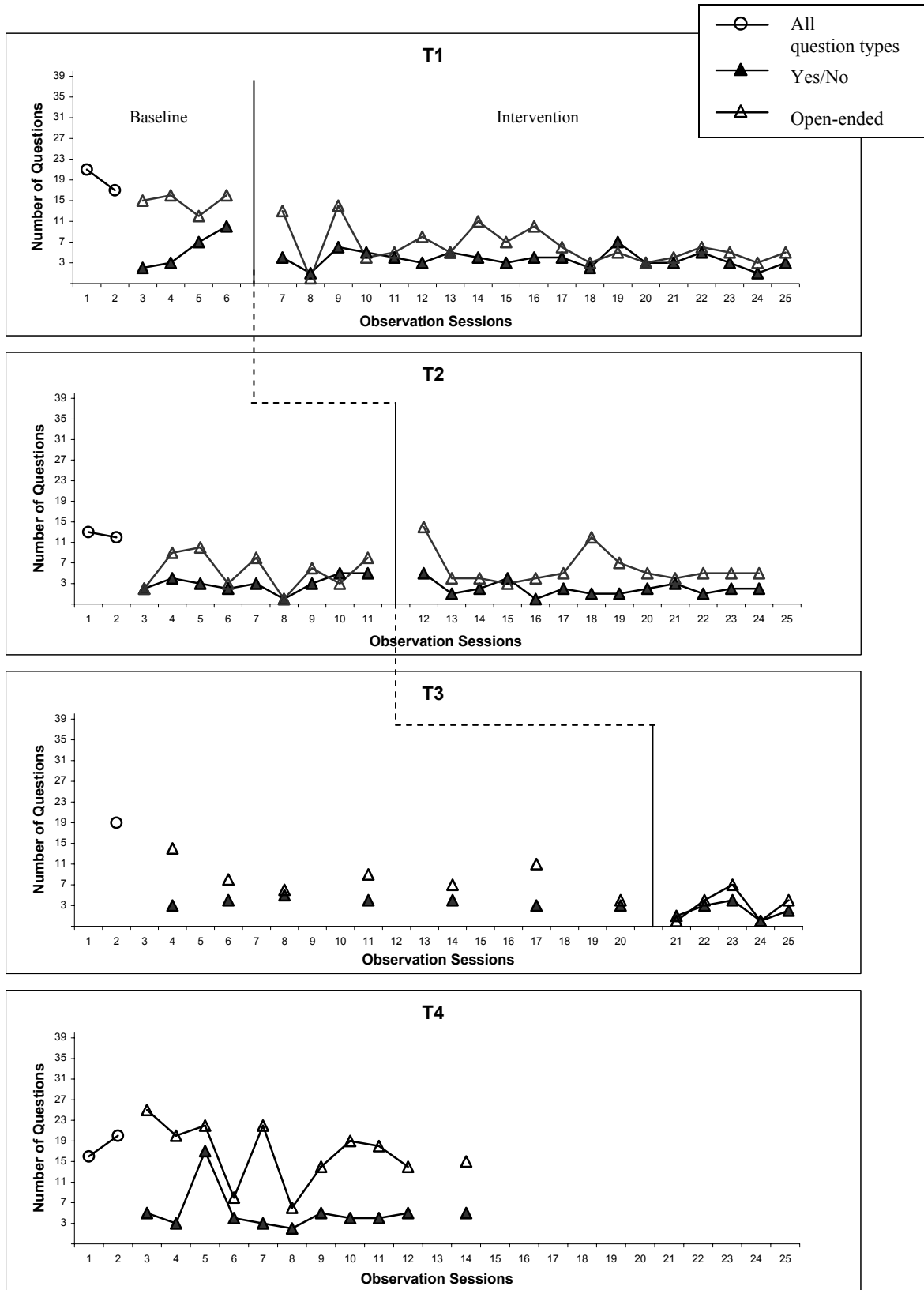


Figure 6. Teachers' Questions (by Type) to Everyone in Class



## Chapter Four

### Discussion

The hypothesis for the present study was that teachers have an effect on the maintenance of selective mutism, and that if teachers were trained on how to interact with a child with SM, they would increase the likelihood that the child with SM would engage in reciprocal interaction, eventually leading to speech. The analyses conducted in this investigation provide a clear demonstration that the intervention, teacher training, had an effect on some of T1's, T2's, and T3's behaviors. As a result of the change in their behaviors, S1's behaviors were changed (see Figure 3).

The increases in the experimental group's behaviors are an important finding because they indicate that the more the teachers asked of S1, the more opportunities he had to verbalize. The relationship between the behaviors of teachers who received the training and S1's behavior's is a clear indication of what happens when a child with SM is engaged. In contrast, S1's behaviors in the control's (T4) classroom is a clear indicator of what happens when a child with SM is not engaged. If teachers did not provide S1 with the opportunities to speak and interact in class, then he did not make those opportunities for himself.

More importantly, the increase in the number of questions the experimental group asked S1 did not result in aversive consequences. S1 handled all of the questions, even on the eighth observation session when T1 asked him 11 questions total after his video



presentation. He did not break down crying or run out of the room; instead he not only responded to T3's questions with only minimal apprehension, but also volunteered to help the next student set up his project. He was clearly not distraught during this observation session or any of the others. Observation sessions like the one previously mentioned provided the teachers with evidence that he was much stronger emotionally than they had assumed. Helping parents and teachers see this has been one of the major problems in treating SM. Parents and teachers usually have the idea that children with SM are emotionally fragile, even to the point that they cannot be asked a question in school or in public because it will be too much for them to handle. The present study provides an example to parents, teachers, and therapists that opportunities to speak should be an essential component of treating SM.

The findings from this study contribute to the small but growing research on selective mutism. From an applied perspective, it is the only reported treatment that has focused on changing the antecedents of the child's behaviors, rather than the consequences. The training changed the way the teachers interacted with S1; therefore changing the way S1 interacted with the teachers. Most researchers have instead identified what the consequences are for the mutism and have tried to change the consequences to make the mutism less effective. From an applied behavioral analytic approach, changing what happens before a behavior occurs, or in this case does not occur, contributes to a much more effective method for producing permanent changes in behavior than solely changing the consequences of the behavior.

Also, this study provides a practical therapeutic approach for therapists to use as a treatment in the applied setting of the school. By training the teachers on the disorder

and how to deal with it, conducting intermittent observations, and then providing teachers with feedback if necessary, the therapist(s) are not relied upon solely for treatment success. For practical purposes, this study represents a more realistic behavioral intervention in which teachers would be expected to bring about the behavior change, not the therapist. The therapist cannot be in the classroom everyday, but the teachers are, and should therefore be the ones implementing the intervention.

### Limitations

There are several limitations to the present study. The first limitation is only having one child with SM participate. The PI did seek to include at least two more children with SM, but no other participants were identified. The second limitation is the lack of control that exists when conducting a study in a naturalistic setting, rather than a controlled setting. The researchers had no control over the class schedules or activities that the classes engaged in. For example, in T1's class they read a book for 12 consecutive observation sessions that took up approximately 3/4 of the class period. Although T1 still interacted with S1, her interactions with the rest of the class decreased. Also, there was another day when approximately 1/3 of the school was absent due to "Take your child to work day". This caused a lack of classroom activities in three out of the four classes; T1 conducted class as usual.

Another limitation, although this was minimal, was the lack of a control throughout the entire study. As mentioned before in the participant section, T3 was initially the control and T4 was to receive the intervention. However, T4 had to leave right when she was about to be trained, thus making T3 the third teacher trained and T4, the control. This is a limitation because there was not a control throughout the study.

This is only a minimal limitation, though, because the teachers were trained at different times and still showed an increase in the dependent measures. This demonstrates experimental control.

#### Future Research Considerations

As previously mentioned, when the teachers began to interact more with S1, he responded in turn and began to interact more with them. He did not however, interact with any of the teachers verbally. Although this was not an expected result of the training, it was evident that teacher training alone was not enough of a change within the environment to elicit verbal behavior from S1. An expansion of the present study would include using differential reinforcement to shape S1's responses, so that he is only reinforced for verbalizing or engaging in approximations of verbalizations, such as whispering to a friend, and not reinforced when he engages in non-verbal communicative behaviors. Also, incorporation of S1's fellow students is necessary if there is to be a complete environmental change. The students in the present study were counter-productive; their intervening and protective behaviors were unexpected. An expansion of this study would have to include student training as well as teacher training. The students would be instructed not to intervene when a teacher asks the child with SM a question and to be supportive of the child with SM when he/she is asked a question. They would also be instructed to interact with the child with SM more often and encourage him/her to speak to them, both in and outside of class.

#### Conclusion

The present study has just begun to examine the possible effects that teachers and others within the school setting may have on a child with SM. How much stimulus

control these individuals have over the child with SM has not been identified, and further experimentation is needed to address this deficiency in the literature. An expansion of the training program that was used in the present study is also needed. It should incorporate not only the child with SM's teachers, but also his/her fellow students, especially friends, the school staff and administration (e.g., cafeteria workers, vice-principle), and his/her parent(s) or guardian(s). The reason for the incorporation of all of these people is to have as much continuity between people and across environments as possible. By also training the parents, the intervention would be extended to settings outside of the school.

In summary, the present study implemented an intervention that succeeded in changing the behaviors of the teachers of a child with SM, and as a result changed his behaviors as well. However, more studies are needed to examine the effects that teachers, students, and parents have in maintaining the mutism and how much of an effect can they have in treating the disorder.

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## Appendices

## Appendix A: Data Collection Sheet

Name of observer: \_\_\_\_\_ Date: \_\_\_\_\_ Setting: \_\_\_\_\_  
 Child observed: \_\_\_\_\_ Teacher observed: \_\_\_\_\_ Time: \_\_\_\_\_ to \_\_\_\_\_

Child

X  
  
O  
  
--  
  
I

Teacher

*IRT (Seconds between questions)*

1	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
2	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
3	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
4	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
5	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
6	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
7	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
8	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
9	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
10	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
11	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
12	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
13	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
14	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

X- Verbal response  
 O- Non-verbal response  
 -- - Verbal Task  
 I- Non-verbal task

X- Yes/No question  
 O- Open-ended question  
 -- - Verbal Task  
 I- Non-verbal task

## **Appendix B: Observation Code for Dependent Variables**

For the teachers the dependent measures were:

- (1) Yes/No questions- any question that can be answered by the child by saying the words “yes or no”, or by nodding “yes” or shaking his/her head “no”. Answers will usually be in the gestured form.
- (2) Open-ended questions- any question that requires a verbal response.
- (3) Inter-response time (IRT)- the time that elapses between questions for the child with SM
- (4) Volunteer requests that require a verbal response- tasks that require the child to engage in verbal responses in order to complete. For example, the class is working in groups and the teacher asks the child with selective mutism to say the answers for the group.
- (5) Volunteer requests that require a non-verbal response- tasks that do not require the child to engage in verbal responses in order to complete. For example, the teacher asks the child to work out a math problem on the board

For the child with SM the dependent measures were:

- (1) Verbal response- the child responds verbally to a question presented by the teacher.
- (2) Non-verbal response- the child responds non-verbally to a question presented by the teacher.
- (3) Volunteered tasks that require a verbal response- child volunteers for a task that requires verbal responses.
- (4) Volunteered tasks that require a non-verbal response- child volunteers for a task that requires non-verbal responses.

## Appendix C: Teacher Training

### Table of Contents

Introduction	1
Pretest	2
Selective Mutism	
a) Definition of Selective Mustism	4
b) Characteristics of Selective Mustism	4
c) Etiology (cause) of Selective Mutism	6
d) Potential affects of Selective Mutism on social development	8
Instruction for Teachers	
a) Getting over your discomfort	9
b) What kinds of questions should I ask?	10
c) Give the child time to answer	10
d) Make concessions as a last resort	11
e) How do I explain his/her situation to the other kids?	11
Role-playing exercises	12
Posttest	13
Appendix: TRF (Teacher Report Form)	15



## Instructional Training for Teachers of Children with Selective Mutism

### Introduction

Welcome and thank you for taking part in this experimental training program for teachers of children with selective mutism! As the teacher of a child with this rare disorder, you have probably asked yourself a number of questions. How can I help him/her when I don't know what he/she is thinking? How fragile is he/she emotionally? How far can I push the issue of speaking, if at all? Should I treat him/her like every other student or should I make concessions? What could have happened to this child that resulted in him/her not being able to speak in certain settings? Why does he/she talk to family members and friends at home but not at school? It is only natural to want to know why or how this can happen to someone, especially a child.

The following training program has been designed to address these questions and to provide you with the necessary tools to help you deal with your student(s) with selective mutism. The more you know about the disorder and the more comfortable you are with dealing with students with the disorder, the more comfortable the students will be with you. The purpose of this training program is to examine the effects of instructional materials, modeled behaviors, role-playing scenarios, and feedback, on the behaviors of the teachers who have been instructed, in comparison with teachers who have not.

Prior to the implementation of the training program, you will be asked to complete a Teacher Report Form (TRF), which will be used to assess your perceptions of the child with selective mutism and a pretest, which will be used to assess your knowledge of the disorder. Following the completion of the training you will again be tested to assess the effects of the training program on your knowledge of the disorder. Feedback will be provided during the modeling and role-playing exercises and on a continual bases after the training has commenced, if necessary.



6. Children with SM will sometimes begin to speak on their own.

True      False

7. Children with SM will usually speak sooner if attention is not drawn to the fact that they don't speak.

True      False

8. It is okay to ask a child with SM a question that does not require a verbal response if you have already asked him/her an open-ended question that requires a verbal response?

True      False

9. The best way to ensure that the child with SM will eventually speak is to continually ask questions that provide the child with the opportunity to speak.

True      False

10. How much time should you allow for the child with SM to answer a question?

Suggestions/Comments:

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## Selective Mutism

### *Definition of Selective Mutism*

As you may or may not know, selective mutism is a rare disorder that is found predominantly in children. Individuals diagnosed with selective mutism, while demonstrating the ability to speak and understand language, do not speak in select social situations in which there is an expectation for speaking, for example the school, despite speaking in other situations, for example the home. It is important to note that the word “selective” is used to indicate that the child cannot speak in select settings, not that the child is selecting when and where he/she will speak. Over the course of time the disorder has taken on a variety of names from “thymogenic mutism” (Waterink & Vedder, 1936) to “speech inhibition” (Chapin & Corcoran, 1947). In 1934, Tramer coined the term “elective mutism,” with the belief that individuals were “electing” not to speak. Hesselman (1973) suggested that the term “selective mutism” was more descriptive because the individual was not electing to be mute, but rather the mutism was selectively dependant on social context (Dummit et. al., 1997). Thus, the diagnosis of “elective mutism” was replaced by “selective mutism” with the publication of the DSM-IV (American Psychiatric Association, 1994).

### *Characteristics of Selective Mutism*

To help you to better understand selective mutism, the following section focuses on identifying characteristics that have been found to be most common amongst children with selective mutism. Some of these characteristics may be found in the student that you are working with and some may not. It should be noted that, as with most disorders, there is no single characteristic that is shared by all of the individuals.

In a study conducted in 1996, Steinhausen and Juzi analyzed 100 cases of selective mutism in order to identify shared characteristics among individuals with the disorder. The results indicated that no two individuals with selective mutism are alike, however some interesting characteristics were shared among several cases. For example, 89% of the cases reported that the individuals were selectively mute in school. The remaining 11% were selectively mute in other settings such as the home or around select people. Shyness was reported in 85% of the cases, which is an indication that the disorder may in fact be a manifestation of social phobia (the leading theory among therapists and researchers of the disorder). Similarly anxiety was reported in 66% of the cases, which may go hand in hand with the reported shyness; if a shy individual is placed in a social situation that is uncomfortable, it is likely that the individual will feel anxious. Depression was reported in 36% of the cases, and sleeping disorders were reported in 30% of the cases.

One characteristic that Steinhausen and Juzi (1996) failed to identify among the cases they analyzed was speech impairments. This is a particularly important characteristic because a shy individual who is anxious in certain social situations and suffers from speech impairment may be self-conscious about speaking. It makes sense that this individual would remain silent due to fear of ridicule or other unfavorable responses. Kolvin and Fundudis (1981) conducted a study in which they analyzed 24 cases of selective mutism. They found that 50% of the cases had some form of speech impairment. Similarly, Wright (1968) reported that 20% of the 68 selective mutism cases that he reviewed had speech impairments. The results from these two studies indicate that the development of speech, or lack there of, may be a contributing factor to the onset

and maintenance of selective mutism. According to Dow and colleagues (1995), speech abnormalities are often found as secondary characteristics to the mutism.

#### *Etiology (cause) of Selective Mutism*

There is no known cause for selective mutism and according to the research, the etiology of the disorder appears to be dependent upon a number of factors (Leonard & Dow, 1995). An example of this may be the scenario described in the previous section in which an individual is shy, anxious, and also has speech impairment. One of these characteristics alone may not be enough to result in the individual becoming selectively mute, however all of them combined may be sufficient.

There are a variety of different theories about what causes selective mutism. One of those theories is that selective mutism is the result of unresolved psychodynamic conflict, or intrapsychic conflict (Atlas, 1993; Elson, 1965; Lysne, 1995; Wergeland, 1980; Youngerman, 1979). According to Atlas (1993), “the psychodynamic significance of elective mutism is emblematic of tenuous experience of the self as differentiated from, yet within, the surrounding human and nonhuman environment.” In other words, these individuals are suffering from distress because they are in certain environments, yet they do not feel as though they are a part of the environment.

Another theory is that selective mutism is not a disorder, but rather a manifestation of social phobia (Black & Uhde, 1992; Black & Uhde, 1994; Crumely, 1990; Dummitt, 1996; Dummit, Klein, Tancer, Asche, Martin & Fairbanks, 1997; Golwyn & Weinstock, 1990; Kratochwill, 1981; Leonard & Topol, 1993; Watson, 1995; Wright, 1995). Crumely (1990) reported a 20-year follow-up of a case of selective mutism in which the individual describes in detail how he used to feel prior to, or while he was

speaking. The individual reported that he felt a kind of panic, like high blood pressure. He also said, "I was afraid to talk or do anything in front of others because I might say or do the wrong thing." According to Crumely (1990) the descriptions that he gave suggested that he might suffer from social phobia. Black & Uhde (1992) presented a case of selective mutism in which the individual suffered from a fear of public humiliation and therefore failed to speak in select social contexts. The individual reported that she did not want to talk "because her voice sounded funny and she did not want others to hear it" (Black & Uhde, 1992).

The broader etiological approach of many investigators of selective mutism views anxiety in general, not specifically social phobia, as the cause of selective mutism (Carlson et al., 1994; Dow, Sonies, Scheib, Moss & Leonard, 1995; Golwyn & Weinstock, 1990; Leonard & Topol, 1993; Reed, 1963; Shreeve, 1991). In a study by Wilkins (1985), a control group consisting of children with emotional disorders, was compared to a group of children with selective mutism. According to subjective reports, the children with selective mutism were thought to be more anxious and depressed than the children in the control group. Carlson and colleagues (1994) theorized that this finding, "might suggest that the mutism is a manifestation of an underlying anxiety or depressive disorder."

The theory that selective mutism is a learned behavior offers another approach to the etiology of the disorder (Albert-Stewart, 1986; Goll, 1979; Halpern, Hammond & Cohen, 1971; Kehle, Owen, & Cressy, 1990; Kratochwill, 1981; Porjes, 1992; Reed & Mees, 1963; Rosenberg & Lindblad, 1978; Shaw, 1971; Sluckin, 1977; Watson, 1992). Reed and Mees (1963) conducted the first published empirical study examining selective

mutism as learned behavior. The authors treated the individual with selective mutism by gradually exposing her to strangers in an environment in which she already spoke. The rationale behind this treatment approach was to extinguish the pattern of learned behavior socially reinforced by the significant others in her life. The authors theorized that strangers would not be paired with the selective mutism, and alternative behaviors would be reinforced. The treatment was successful.

#### *Potential affects of Selective Mutism on social development*

Although it has been documented that most children with selective mutism eventually overcome the disorder, it is uncertain how much of an affect the disorder has on the child's social skills or more importantly the child's social life (Ciottone & Madonna, 1984; Dow, Sonies, Scheib, Moss, & Leonard, 1995; Dummit, Klein, Tancer, Asche, Martin, & Fairbanks, 1997; Kolvin, & Fundudis, 1981). The importance of social interactions and possessing adequate social skills is well documented within the literature (Bandura, 1977; Gainotti, 1997; Meisels, Atkins-Burnett, & Nicholson, 1996; Murphy & Vincent, 1989; Peterson & McConnell, 1993). According to Meisels and colleagues (1996), children that rank highly in social competence and social skills will have more success in academics, school adjustment, using peers as resources, displaying appropriate affection, possessing leadership capabilities, and possessing moderately high self-esteem. Based on these theories, it could be surmised that the effect that selective mutism may have on a child could result in poor social skills development and subsequently, a poor social life. Therefore, in order to avoid this effect the selective mutism would have to be resolved at a younger age, rather than allow the disorder to resolve itself, so that the child can develop the appropriate social skills and adequate social life.



## Instruction for Teachers

### *Getting over your discomfort*

There is a great deal of uncertainty when dealing with a child with selective mutism. This uncertainty may lead to some discomfort when trying to communicate with the child. As a result you may find yourself interacting with the child only out of necessity; asking him/her questions that pertain only to school related matters. Additionally you may only ask questions that require yes/no answers, which can be answered with a head shake, or questions that can be answered using the child's fingers (i.e., math questions) or by gesturing (i.e., pointing). All of these responses are perfectly understandable, however, they allow the child to escape or avoid the expectations of speech that are placed on the other children. This of course can lead to some of the children feeling as though the child with selective mutism is being treated differently, and they may begin to resent him/her because of this.

It is, therefore, important that you get over the discomfort of pushing the child to speak. If you ask the child a question and he/she looks away or even begins to cry, you should not immediately allow the child to escape by consoling the child or saying, "it's okay, I'm sorry", or re-asking the question in a way that allows a non-verbal response. Doing so may reinforce the behaviors of looking away or crying as a way for the child to escape your questions in the future. Instead, if the child looks away don't respond at all. Wait for the child to respond in some way. If he/she begins to cry you should say, "I know this is difficult for you, but this is something we have to do."

*What kinds of questions should I ask?*

Some teachers will only call on the child with selective mutism to answer yes/no questions or when he/she volunteers to answer a yes/no question or solve a problem on the board. While this might seem like it is helping, again it is only reinforcing the mutism by allowing the child to avoid speaking. The best types of questions to ask are open-ended, which require some form of verbal response. Questions beginning with what, who, why, when, or how are usually open-ended questions. Start out by asking an open-ended question, and then if the child still does not answer, then allow him/her to answer a similar question but with a yes/no response.

*Give the child time to answer*

Here is an example of a line of questioning that a child with selective mutism may experience: “What did you do over the weekend?” (a great open-ended question), three to four seconds expire and the person asking the questions begins to feel uncomfortable, so then he/she asks, “Did you have a good weekend?”. The first question was appropriate and should have been given time to answer, but the person asking could not bare the silence. Make sure you allow at least 15 seconds in between questions. It will be uncomfortable, but the best way to get past this is to concentrate on counting the seconds in your head. If you do this you will not be distracted by the uncomfortable silence. Prepare for those around you to be uncomfortable as well when you ask these questions. They will most likely try to break in the line of questioning and ask an easier question. Tell them, “He/she can answer the question that I asked, give him/her time.” Most people will get the hint and understand what you are doing. If they do not, ask them to be quiet.

### *Make concessions as a last resort*

There are some instances when it will be acceptable for you to make special concessions for the child with selective mutism. In addition to giving the child an out after asking an open-ended question by allowing the child to answer a yes/no question, it is also acceptable for you to find other ways for the child to participate in group projects or presentations. For example, say you are having the students split up into groups to answer questions on a chapter in a book; it is okay to allow the child with selective mutism to write his/her answers. Similarly, if you are having the class do oral presentations on a topic, it is okay for the child with selective mutism to do a video presentation at his/her home. Concessions like these usually take forethought, so it will be important for you to identify ahead of time which tasks the child should be expected to do like the rest of the students, and which tasks the child will need concessions made in order to complete them.

### *How do I explain his/her situation to the other kids?*

The last thing you want to do is draw attention to the child with selective mutism for the wrong reasons. For example, it is okay to ask the child a question in the classroom because that is something that all of the children experience. By not asking the child a question you are treating him/her differently. Conversely, it is not okay to single out the child to let everyone know how he/she is different. Instead, if other students become curious, tell them that he/she doesn't speak at school because he/she is shy and needs some encouragement. Tell them that he/she will speak when he/she is ready.

## Role-Playing Exercises

The trainer and teacher will each be required to switch roles so that the teacher can become more comfortable with the new methods that he/she has just been instructed to incorporate, as well as see how the trainer models appropriate teacher behavior. These exercises should be repeated until the teacher is comfortable with what he/she is being asked to do.

### Scenario 1

The teacher approaches the child to talk about something that happened recently, such as a football game or the child's parents buying a new car. Note the possibilities of topics you can discuss with the child are endless. Keep track of clubs the child is in or what shirts he/she wears, which may give an indication of what he/she is interested in. Don't forget to incorporate your sense of humor; this will help to break the tension.

Teacher: "Hey (child's name), **how** did you like that football game last night?"

Student: Waits awhile and then shrugs his/her shoulders.

Teacher: "**What** was your favorite play?"

Student: Waits awhile and then shrugs his/her shoulders.

Teacher: "Well if you want to talk about it later I am here all week"

### Scenario 2

The teacher asks the child a question during the classroom discussion on multiplication.

Teacher: "(Child's name), **What** happens when we multiply the number zero by any other number?"

Student: Looks down at the ground and does not respond.

Teacher: "Do we get the number one?"

Another student: "I know, I know"

Teacher: "Give (child's name) a chance to answer."

Teacher: "Do we get the number zero?"

Student: "Shakes his/her head to answer yes"

Teacher: "Good job! That's right we get zero when we multiply zero by any other number."



6. Children with SM will sometimes begin to speak on their own.

True      False

7. Children with SM will usually speak sooner if attention is not drawn to the fact that they don't speak.

True      False

8. It is okay to ask a child with SM a question that does not require a verbal response if you have already asked him/her an open-ended question that requires a verbal response?

True      False

9. The best way to ensure that the child with SM will eventually speak is to continually ask questions that provide the child with the opportunity to speak.

True      False

10. How much time should you allow for the child with SM to answer a question?

Suggestions/Comments:

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