The efficacy of an actor-emotion technique on changing communication attitude in children who stutter: a treatment outcome study

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THE EFFICACY OF AN ACTOR-EMOTION TECHNIQUE ON
CHANGING COMMUNICATION ATTITUDE IN
CHILDREN WHO STUTTER: A TREATMENT OUTCOME STUDY

A Thesis

Submitted to the Graduate Faculty of the
Louisiana State University and
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Master of Arts

in

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by
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ABSTRACT

The purpose of the present study was to test the efficacy of an actor-emotion strategy approach on changing communication attitudes in an adolescent child who stutters. The participant for this study was an eleven-year, ten-month old male attending a public middle school in Baton Rouge, Louisiana who presented with a severe fluency disorder. The participant attended group sessions Monday-Thursday from 9:00-12:00 for 6 weeks as part of a fluency day camp. The study used a worksheet-based measure to evaluate emotionality on a daily basis.

Using an ABA withdrawal design, two analyses were completed. The first analysis examined the stability or reliability of the “emotions worksheet” as a measure to identify changes in emotional reaction to stuttering and speech. Results for Phase A showed an unusual range of “total” scores, and what appears to have been one outlier at measurement 2. Despite the relatively stable trends during phases B and A2, the overall data indicate that the “emotion worksheet” as applied in this study was not a reliable measure.

The second analysis examined the data collected from the daily journal entries to determine efficacy of the actor-emotion strategy on changing communication attitude. In general, results show little change from the first baseline phase through the treatment phase. Withdrawal of the treatment in the second baseline phase also appeared to result in little change. The average for both comparisons was not reliably different, which suggests that the actor-emotion strategy as applied in this study was not an effective intervention technique for altering the child’s emotional reaction to his speech.
CHAPTER 1
INTRODUCTION

Many children and adolescents who stutter tend to develop negative attitudes about their stuttering because it interferes with so many aspects of their lives. Typical negative attitudes include beliefs that they are not good speakers. Consequently their speech can become entrenched with emotions such as loss of control, fear, avoidance, guilt, shame, and embarrassment (Van Riper, 1973). Many speech-language pathologists recognize that these negative emotional states are an important component of a fluency disorder that must be addressed in intervention. In Cooper’s (1979) terms, therapy is inadequate if it does not assist the individual in clarifying his feelings and attitudes about disfluency. This position is consistent with the report that the long-term maintenance of instated fluency is related to an improved attitude toward speech (Guitar, 1979; Guitar & Bass, 1978).

Clinicians seek to change the attitudes of school-age children who stutter using a variety of counseling techniques. Guitar (2006) and Sheehan (1975) advocate helping children explore and explain their stuttering behaviors and their attitudes about their stuttering so that they will become more in control of their emotions. They believe that the child must become more open and accepting of himself. They encourage children to talk openly about their stuttering to reduce their fear of stuttering.

Dell (1979) and Prins (1997) believe that changes in children’s negative attitudes will result from learning to modify moments of stuttering. Children are taught to identify and relax the tension in their speech mechanism. Prins (1997) reduces the intensity of emotions his clients feel when they stutter by use of videotapes to teach his clients how to calm themselves when they stutter. As children change their emotional responses, they discover that they can change not only how they feel but also how they stutter. Yet,
despite these postulations, there are few studies that have investigated the effectiveness of
treatment strategies that seek to change a person’s communication attitude. Of the
studies that are available, results are not in agreement.

The goal of the current study is to investigate the efficacy of an actor-emotion
technique to change communication attitudes in an adolescent child who stutters. Actors
take on a disguise to convince the audience they have become a new character. To
prepare, they perform exercises and practice how their character reacts and speaks. The
actor-emotion strategy uses the acting principle of disguise to motivate the child who
stutters to explore his emotions toward communication by practicing emotional exercises
used by actors in front of his peers.

It is hypothesized here that the context of learning how to express emotion in
acting will enable the child to understand his own emotions, the linkage between emotion
and control of speech, and how to control his speech. The actor-emotion technique
focuses on the freedom of expression of emotions using role-playing, followed by
intensive therapy sessions integrating stuttering modification and fluency shaping
methods. The actor-emotion technique is different from traditional strategies because it
separates the emotions and feelings from the moment of stuttering. The rationale
underlying the actor-emotion strategy stems from the process of narrative counseling to
externalize the problem or focus on separating the problem from the person (Payne, 2000;
White & Epston, 1990). The therapist uses externalizing language that implies that the
problem is affecting a person rather than existing within the individual (Payne, 2000).

Review of the Literature

This literature review employed a key word search for the following terms:
communication attitude, counseling, fluency, and adolescents. This resulted in
predominantly descriptive studies involving adult participants with only a few testing
intervention approaches that are designed to change communication attitude. At the present time, the literature contains more information about the nature of attitudes associated with stuttering than effective intervention processes to change communication attitudes. The literature review that follows is organized into four sections. First, I present research completed on communication attitude differences between adults who stutter and nonstutterers. This body of work was selected because it presents the potential end stages of unchanged attitudes and emotions in children. The second section presents studies showing that elementary-school aged children who stutter exhibit negative attitudes and the relationship between communication attitude and disfluency. The third section describes the typical intervention techniques used to reduce or change communication attitude. Finally, the literature review presents research completed on the effectiveness of support groups and cognitive-behavioral approaches on communication attitude. Cognitive-behavioral approaches allow for clients to examine their thought processes and learn that what they think influences what they feel and how they act, particularly in response to behavior such as muscle tension which may lead to more stuttering.

Communication Attitude Differences between Adults Who Stutter and Nonstutterers

Descriptive research has shown a predictable developmental course for stuttering in which adolescent children who stutter develop emotional reactions to their speech that lead to the adults’ lack of self-confidence in speaking (Guitar, 2006). Miller and Watson (1992) examined the relationship between anxiety, depression, and communication attitude among adults who stutter and nonstutterers. Fifty-two adults who stuttered and fifty-two nonstutterers participated in the study, ages ranging from sixteen to sixty-eight. Stuttering severity, based on subjects’ self-ratings, characterized the group as follows: 19 very mild to mild; 23 moderate; and 10 severe to very severe. The groups were
compared for their scores from the Erickson Modified 24 scale (Erickson); (Andrews and Cutler, 1974), the State-Trait Anxiety Inventory (STAI) (Spielberger, 1983), and the Beck Depression Inventory (BDI) (Beck, 1987). Repeated measures analyses of variance were used to examine the between-group differences in raw scores for each test instrument. The Erickson scale was the only test with a significant between-group difference. The stuttering group had a mean of 13.25 (SD = 6.48) and the nonstuttering group had a mean of 7.35 (SD = 5.02). Furthermore, this negative attitude becomes worse as self-ratings of stuttering become more severe. The results of this study suggest that adults who stutter exhibit poor attitudes about communication but they are not generally more anxious than nonstutterers.

Clinicians hoping to prevent the development of adult-like stuttering attitudes toward communication include therapy goals and objectives for children who stutter attempting to reduce or change negative emotions. The following section presents evidence that children as young as seven years of age display negative attitudes toward communication and that this attitude is related to fluency.

Communication Attitude and Severity Differences in Children Who Stutter and Do Not Stutter

De Nil and Brutten (1991) examined the relationship between communication attitudes of children who stutter and children who did not stutter. A Dutch translation of the Communication Attitude Test (CAT-D) was administered to 70 Dutch-speaking Belgian children who stuttered and 271 Dutch-speaking Belgian children who did not stutter (ages ranging from seven to 14 years). Of the children who stuttered, 37 percent were rated as mild, 29 percent were rated as moderate, and 19 percent were rated as severe, as determined by their therapist. Both groups were sub-divided into five age levels (7, 8, 9, 10, 11+) to evaluate the existence of a potential group by age interaction.
The mean CAT-D score for the children who stutter (16.69; SD=7.29) was significantly higher than the mean for the children who did not stutter (8.71; SD=5.53). The ANOVA also revealed a significant group by age level interaction (p < .05). At each of the five age levels, between-group differences in CAT-D scores were found to be statistically significant; however, the group difference was larger at the older age levels than at the younger ones. The stuttering children tended to show somewhat higher CAT-D scores with increasing age, whereas the mean CAT-D scores of the nonstuttering children decreased after age 9.

The data indicated that as a group, the children who stuttered showed more negative speech attitudes than did the control group of nonstuttering children. These results contrast with earlier findings that such negative attitudes are not found in children of elementary school age (Bloodstein, 1987, p.42, Luper and Mulder, 1964, p.21). The authors believe this is a result of the type of measure used in previous studies, which often consisted of clinical observations or indirect measures. The observations of the present study appear to provide some evidence that even children as young as age seven may have already developed a negative self-concept about their communication abilities.

The downward trend seen in CAT-D scores of the nonstuttering children older than age of nine may be interpreted as a reflection of the growing speech competence experienced as nonstutterers become more efficient language users. In contrast, the upward trend seen in CAT-D scores of the children who stutter from age seven to ten may be interpreted as a reflection of decreased competence as a speaker resulting in decreased confidence in their own verbal communicative abilities as they get older. These observations point toward the need to develop clinically useful strategies to modify the negative speech attitudes of young children who stutter.
Vanryckeghem and Brutten (1996) examined the relationship between communication attitude of children who stutter and the number of disfluencies they produce. Fifty-five children who stuttered and 55 children who did not stutter (ages ranging from six to thirteen) participated in the study. Each participant was given the Communication Attitude Test (CAT), read a passage aloud, and participated in a five minute conversation. For both the passage reading and the conversation, disfluencies were marked and measured for a frequency analysis.

The mean CAT score for the children who stutter was 17.44 (SD= 6.81) and the mean for the children who did not stutter was 7.05 (SD= 4.69), a significant between-group difference. Percentages of disfluencies were related to the CAT score by computing Spearman rank order correlations. Low moderate correlations (ranging from +.33 to +.46), which were also statistically significant (p≤.05), were obtained for the children who stuttered. This correlation would suggest that children tend to display a similar relationship between negative communication attitude and number of disfluencies to that of adults. The correlations were negative and not statistically significant for the nonstutterers.

The data indicated that grade-school children who stutter have a significantly more negative communication attitude than that of their nonstuttering peers, consistent with data observed by De Nil (1991). What is not clear, however, is whether the negative beliefs set the occasion for fluency behavior, or if the speech disruption plays a role in shaping the communication attitude. There may even be a third factor, in which the negative communication attitude and disfluency rate are a result of each other. What the results do highlight is that the speech disruptions exhibited by the children who stuttered covaried significantly with their communication attitude.
Negative attitudes related to speech may be associated with not knowing when the disfluencies will occur. Children may feel a sense of failure when this happens, leading to a feeling of helplessness and inadequacy. Children begin to feel that they are unable to do anything about their fears or the interruptions that occur in their speech. For these reasons, fluency therapy often includes counseling as an integral part of treatment. Being able to talk about the feelings and emotions accompanied by stuttering is considered a valuable aspect of therapy. Talking aloud about the problem can help reduce any tension that may be caused by concealing stuttering behaviors. The following literature describes the typical intervention techniques used to reduce or change communication attitude in children who stutter.

Typical Intervention Techniques to Reduce or Change Communication Attitude

According to Guitar (2006), using information provided by Van Riper (1973, 1975) and Johnson (1959), the following four techniques have been incorporated into typical fluency intervention to reduce and change negative attitudes and feelings: 1) discussing stuttering openly 2) using feared words 3) freezing/holding on to the moment and 4) stuttering voluntarily. These techniques allow for the child to tolerate and accept his stuttering, reducing feelings of fear, embarrassment, shame, and anger.

Discussing stuttering openly with family, friends, and acquaintances allows for the child to become more comfortable with their stuttering. As the child opens up, he begins to lose fear of stuttering and becomes more relaxed and comfortable. The child is encouraged to explain to others what therapy entails, make comments about his stuttering as they occur, and to encourage questions from his listeners. It is important for the child to let listeners know how to respond when he is caught in a moment of stuttering so that no one feels uncomfortable.
Another important goal for overcoming stuttering is to reduce the avoidance of feared words. According to Guitar (2006), avoidance perpetuates stuttering and to make progress the child needs to change his “mind set” to approach and seek out words he finds difficult. By adopting an “approach attitude,” the child will be prepared and more relaxed, reducing the amount of tension or holding back. The child begins to tolerate his stuttering and again becomes more comfortable with it.

By experiencing core behaviors repeatedly while remaining relatively calm, the child will find that his tolerance for them increasing. The child will no longer be fearful at the thought of getting stuck on a word. The core behaviors will become more relaxed, which is the key to change. Stuttering voluntarily motivates the child to confront his fears and discover that it is not as bad as he thought. When the child learns to remain calm while voluntarily stuttering, he again begins to tolerate and accept his stuttering. Effectiveness of Treatment Techniques on Changing Communication Attitude

The following literature presents a review of studies on the effectiveness of support groups and cognitive-behavioral approaches on changing communication attitude. Miller and Watson (1992) examined the relationship between stuttering participants’ self-ratings of severity and their scores on state and trait anxiety, depression, and communication attitude. Fifty-two adults who stutter participated in the study, ages ranging from sixteen to sixty-eight. Stuttering severity was based on subjects’ self-ratings, which characterized the group as follows: 19, very mild to mild; 23, moderate; and 10, severe to very severe. Fifty-nine percent of the stutterers attended support group meetings on a regular basis. The support group met once a month to discuss situations they may face at work or with friends, different therapy approaches, and ways to get the most out of life despite their stuttering. Using a separate ANOVA, analyses revealed a significant member effect for the Erickson scale. A more positive communication
attitude (mean Erickson score of 11.41) was exhibited by active support group members than inactive members (mean Erickson score of 15.95).

When looking at comparisons within the stuttering group, results revealed that active members of a support group tended to have a more positive attitude towards communication. These findings support the hypothesis of Andrews and Cutler (1974) that participation in a support group as an integral part of treatment may facilitate a change in communication attitude that improves long-term maintenance of fluency.

Even though support groups are targeted to the population of adults who stutter, it presents supporting information that discussing emotions openly in front of peers helps to decrease negative emotions. The actor-emotion technique utilizes the freedom of expression in the same way. However, unlike the actor-emotion technique, support groups make use of past experiences from their leaders and group members to help counsel their peers. Although new therapy approaches may be discussed at the meetings, a clinician is not always present to teach new skills and provide guidance. The actor-emotion technique provides a context for talking about emotion and its expression through speech characteristics that facilitates exploration of their feelings toward their own fluency and speech production without pressure.

Daly, Simon, and Burnett-Stolnack (1995) recommend a comprehensive program based on their clinical experience that take into consideration the personal aspects of their students’ fluency and speech production, and the utilization of strategies that encouraged mental changes as well as behavioral changes in their students. The program consists of two phases: speech treatment strategies (phase 1) and cognitive and self-instructional strategies (phase 2). Speech treatment strategies involve any and all fluency-shaping methods. For phase 2, cognitive strategies were incorporated into therapy to allow for and encourage students to see themselves in new roles. It was the belief of
neurolinguistic researchers that changes in behavior occur more often when people change the way they communicate to themselves.

To facilitate positive thinking, students were encouraged to keep a journal of successful speaking experiences. It was hoped that maximizing the successes and minimizing the failures would lead to changes in communication attitude. Students found reading their journals aloud when having negative feelings to be very helpful. According to the authors, students were also the ones who encouraged continued use of procedures such as relaxation, mental imagery, and positive self-talk. The article infers that the speech-language pathologist should take on the role as an empathic listener and an encouraging guidance counselor, like that of an athletic coach, to promote positive thinking.

Similar to support groups, the comprehensive program suggested by Daly et al. uses the advantage of counseling to encourage relaxation and positive thoughts in their students. However, the comprehensive program resembles the actor-emotion technique in its involvement of structured therapy using fluency-shaping methods and mental imagery. The comprehensive program incorporates relaxation exercises, mental imagery of future speaking outcomes, and rehearsal of positive, success-oriented statements. The program, however, does not openly discuss negative emotions associated with disfluency as does the actor-emotion technique. The actor-emotion technique takes the next step and allows for role-playing of real speaking situations in which emotions are targeted and explored.

Blood (1995) evaluated the effectiveness of a game-based program called POWER2 with high school students who stutter. The game was developed as a vehicle to discuss feelings and attitudes in a non-threatening way, in hopes of providing speech-language pathologists a structured and easy way to help high school students deal with
their attitudes and feelings toward stuttering. The secondary purpose of the game was to aid in relapse control.

The basis of the program was on the belief that automatic changes in attitude are not the result of fluency-shaping procedures. Instead, attitude changes stem from cognitive changes, specifically in the areas of approaching, understanding, and problem solving. To facilitate cognitive changes, the approach must focus on three factors: coping with negative emotional states—frustration and anger, social pressure, and coping with interpersonal conflict. From these factors Blood (1995) developed six components to be used in the game: P(ermission), O(wnership), W(ell being), E(steem of one’s self), R(esilience), and R^2(esponsibility), which became the acronym POWER^2.

Participants in the study consisted of three European male high school students with a history of stuttering. Students were evaluated in the areas of speech, feelings, and thinking in a multiple baseline across subjects design. Motor skills and cognitive changes were worked on systematically. To facilitate cognitive changes at least 50 hours were devoted to discussing thoughts and feelings about responsibility, ownership, resilience, recovery, problem solving, and coping. To encourage self-monitoring and record changes in behavior, attitudes and feelings, daily and weekly diaries were used.

The first phase of treatment consisted of twenty-five hours of intensive treatment sessions. The second phase of treatment involved the use of the game POWER^2 for a total of fifty hours in which the clients took turns by throwing two dice and moved the appropriate spaces. Different spaces on the game board addressed issues concerning awareness, problem solving, and self-esteem as a form of desensitization, helping the clients to perceive their reactions. Game cards contained questions to teach the clients how to problem solve, be more assertive, and test their knowledge of stuttering. Diversion card activities were used to build self-confidence and self-esteem.
Results of the study revealed that stuttered syllables reached below 3% for each of the subjects by the end of the treatment, SRS-Avoidance scores for all three subjects changed from a mean score of 2 to 1, all three subjects changed their overall confidence ratings from 56.3% to 86.0%, and the mean Erickson score went from 19.7 at baseline to 10.3 at the 12 month follow-up. The results suggest that counseling facilitated changes in clients’ avoidance patterns and recalibrated their attitudes and feelings toward stuttering to represent a positive and less fearful attitude. The intervention package facilitated changes in confidence levels, assertiveness, and reduction in disfluencies. The study gives evidence that speech-language pathologists can use an intensive fluency-shaping protocol and game therapy for relapse management to successfully provide intervention for stuttering. Because the study involved a multiple baseline across subjects design, suggests that the results are not restricted to a particular subject.

Just like the two aforementioned studies, POWER² utilizes counseling to facilitate changes in their students’ communication attitude. POWER² is the most similar to the actor-emotion technique of the studies found. Through the use of a game, POWER² integrates fluency-shaping methods and questions to facilitate awareness, identification, feelings, and attitudes about stuttering. Although POWER² does include role-playing in challenging scenarios about stuttering, it differs from the actor-emotion technique in that its’ purpose is to problem solve and offer alternative solutions. The purpose of the actor-emotion technique is to facilitate freedom of expression and exploration of emotions associated with stuttering.

The purpose of the present study is to test the efficacy of an actor-emotion strategy approach on changing communication attitudes in an adolescent child who stutters. The study used a worksheet-based measure to evaluate emotionality on a daily basis. The hypothesis under test is that the adolescent child would demonstrate a
significantly more positive communication attitude toward speech when introduced to the actor-emotion strategy.

The questions that guided the research were:

1. What is the stability or reliability of a worksheet-based measure to accurately identify changes in emotional reaction to stuttering and speech?

2. Does the use of an actor-emotion strategy improve communication attitude in an adolescent child who stutters?
CHAPTER 2

METHODS

Research Design

The purposes of this study were to evaluate the stability of a worksheet-based measure of emotionality and the treatment efficacy of an actor-emotion strategy on changes in communication attitude of an adolescent who stutters. The dependent measure was the relative number of negative, neutral, and positive statements related to stuttering produced by the participant across the time frame of six weeks. The independent variable was the use of the actor-emotion strategy. The independent variable had two levels: use of the actor-emotion strategy and withdrawal of the actor-emotion strategy. The study employed an ABA withdrawal design in which the A phases did not involve the actor-emotion strategy, being used to gather baseline data. Phase B introduced the actor-emotion strategy. During Phase A₂ the actor-emotion strategy was withdrawn. Each phase lasted two weeks with eight sessions per phase.

Participant

The participant for this study was an eleven-year, ten-month old male attending a public middle school in Baton Rouge, Louisiana who presented with a severe fluency disorder, as indicated by the Systematic Disfluency Analysis (SDA). The SDA is a criterion-referenced tool that assigns a severity of stuttering by systematically assigning values to each type of disfluency. At pretest the participant’s total percentage of disfluent speech was 35% for monologue, 30% for dialogue, and 15.5% for oral reading. His disfluent speech was characterized by blocks, repetitions, prolongations, revisions, and secondary characteristics also exist including audible exhalations, facial grimacing, and visible tension. During conversation, he often broke eye contact, did not answer questions, and decreased volume during speech making him difficult to understand. The
Communication Attitude Test (CAT) (Brutten, 1985) which was administered rates how attitude about stuttering affects speech. There are thirty-five statements about speech situations, and the child was instructed to indicate whether the statement was true or false about him. At pretest, the participant selected nineteen negative statements about speech including: I am not a good talker; some kids make fun of the way I talk; people worry about the way I talk.

Materials/Setting

Required test protocols included the Systematic Disfluency Analysis and the Communication Attitude Test. This study demanded a high quality video recorder for accurate transcription of language samples needed for the Systematic Disfluency Analysis. All testing and intervention were performed at the LSU Speech, Language, Hearing Clinic, under the supervision of a certified speech-language pathologist. All data collection and intervention were conducted by the researcher and several graduate clinicians. The participant attended group sessions Monday-Thursday from 9:00-12:00 for 6 weeks as part of a fluency day camp.

Procedures

The theme of the fluency day camp was centered on “theater” in which techniques used by stage actors was incorporated into the teaching of fluency enhancing behaviors. The participant and other clients participating in the fluency day camp adapted a story for the stage and presented a small performance for their parents at the end of the 6-week period. Each session included a fluency enhancing/stuttering modification treatment strategy, a “drama/theater” component, and adequate time for journaling.

Fluency enhancing/stuttering modification activities included: group discussion of stuttering, practicing tense vs. “easy” speech, diaphragmatic breathing, practicing techniques with hand signals, easy onsets, cancellations, pull-outs, and practicing phone
conversations. Drama or theater activities included: pantomime, guided imagery, improvisation, theater vocabulary, stage areas/positions, role-play, developing a script, rehearsals, and a final performance of a short play. A detailed listing of all activities as employed in each ABA phase is displayed in Appendixes A, B, and C.

Independent Variable

During phase B, the actor-emotion strategy was incorporated into the “drama/theater” component. The participant and the other children discussed and enacted various emotions as part of a dramatic exercise. For example, the clinician discussed different types of emotions most commonly experienced by people who stutter: Fear, Apprehension, Anger, Frustration, Embarrassment, and Shame. This is similar to the discussing stuttering openly phase of intervention used by Guitar (2000). The participant and the other clients were then able to discuss how negative emotions were sometimes associated with their speaking. Other discussions included what the participants were afraid of and rated their fears using a “worry ladder” (Chmela, 2001).

Acting exercises involved different levels of acting, ranging from reading one line aloud using different expressions/emotions to acting out full scenarios that required character and emotional changes. For example, during one acting exercise requiring two participants, one participant pretended to be “clay” unable to move by itself, and the other was the “sculptor” who molded the “clay” by positioning the other person’s arms and legs in an emotional action pose, such as hitting a baseball. Meanwhile, the other clients attempted to guess what the “statue” was doing and what emotion the statue portrayed. Then a different client chose a new emotion from a set of emotion cards, and the sculptor changed his statue’s body language to reflect that new emotion.

Other actor-emotion activities included board games, in which participants would perform actions presented on the game space they landed on. The game board was also
used to facilitate discussions and role-playing using emotions. A detailed listing of actor-emotion activities may be seen in Appendix B.

**Dependent Variable**

Every day the participant and the other clients were required to write either a “positive,” “negative,” or “neutral” statement on their “emotions worksheet” using each word from a prepared list. The list contained words related to speech (talking, stutter, blocks, repetitions, conversation, say, word, tell, disfluency, cancellation, tension, prolongation, voice) and “neutral” words (stage, tickets, director, theater, props, actor, pretend, costume, scene, role, script, character, rehearsal). The participant was instructed to write a truthful sentence about himself and use the word in the correct context. See Appendix G for a sample “emotions worksheet”. The “emotions worksheet” was as an adaptation of worksheets developed by Chmela and Reardon (2001).

**Data Coding**

The participant’s statements from the “emotions worksheet” were scored on a daily basis and charted. A score of 1 was given to a statement that was truthful, used in the correct context (“I block on words that start with “m”), and written about himself (“I am a stutterer”). A score of 0 was given to a statement that was not truthful (“I do not stutter”), not used in the correct context (“I block other players in football”), or not written about himself (“He blocks”). The number of statements with a score of 1 was counted and charted in each category: negative and positive.

All scores within the negative category were converted to negative numbers (i.e. a score of “2” became “-2”), and all scores within the positive category remained a positive number. The new scores for the negative and positive categories were combined to establish a “total” score for each day (e.g. Day 1 = 2 negative scores (-2) combined with 1 positive score (1) to establish a “total” score of -1).
The participant was also assessed before and after intervention. This assessment consisted of the Communication Attitude Test and weighted scores to find a disfluency severity rating and percentages of more and less typical disfluencies using the Systematic Disfluency Analysis. Administration of both tests was completed by two graduate clinicians, under the supervision of a certified speech-language pathologist.

Reliability

In order to control for variation in clinician technique, all clinicians used only the methods discussed in a collaborative meeting. The clinician had lesson plans, including the methods to be used for that day, approved beforehand. Each clinician elicited responses for the “emotions worksheet” using a standard script. A certified speech-language pathologist was enlisted to re-score the sentences on the “emotions worksheet.” Agreement between the two daily sets of protocol scores (negative and positive) and the “total” scores was 95%. Given the low level of error that was found, the scoring of the entire data set was considered reliable.

Analysis

The “total” scores for each day in each phase was charted, plotted and graphed. Using the “total” scores in a t-test, changes from Phase A to Phase B and from Phase B to Phase A₂ were analyzed. A comparison was made between the number of negative statements selected on the Communication Attitude Test at pretest and posttest to further analyze any changes in communication attitude. A comparison was also made between the percentages of disfluencies at pretest and posttest, as indicated by the Systematic Disfluency Analysis.

Predictions

It was predicted that the participant would write more positive statements using speech-related words during the B Phase, relative to the A Phases. This prediction is
based on the findings of Blood (1995), that fluency-shaping techniques enhanced with the aid of counseling techniques and self-monitoring skills resulted in cognitive changes and can alter young adults’ beliefs about stuttering and themselves.
CHAPTER 3
RESULTS

The results of this study are addressed in three principle sections. The first section evaluates the stability or reliability of the “emotions worksheet” as a measure to identify changes in emotional reaction to stuttering and speech. The second section includes analyses of the data collected from the daily journal entries to determine efficacy of the actor-emotion strategy on changing communication attitude. The third section evaluates the participant’s overall change in communication attitude.

Reliability

Inasmuch as the measure of attitude used here has not been employed on a session by session basis, the first question was whether it provided a stable measure of attitude. Table 1 profiles descriptive information about the “total” scores for each phase. The mean of the first A phase was -1.5 (S.D. = 1.2), the mean of the B phase was -2.2 (S.D. = 1.0), while the average score in phase A2 was -1.7 (S.D. = .8). The standard error of measurement suggests that each measure is good with about ±0.4.

Table 1
Descriptive data for the “total” scores of the ABA Phases

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error of Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase A</td>
<td>7</td>
<td>-1.5</td>
<td>1.2</td>
<td>0.42</td>
</tr>
<tr>
<td>Phase B</td>
<td>6</td>
<td>-2.2</td>
<td>1.0</td>
<td>0.40</td>
</tr>
<tr>
<td>Phase A2</td>
<td>6</td>
<td>-1.7</td>
<td>0.8</td>
<td>0.33</td>
</tr>
</tbody>
</table>

However, analysis of Figure 1 shows an unusual range of “total” scores, from -3 to +3, during the baseline phase. There appears to have been one outlier at measurement 2 at which time the participant recorded 3 positive statements toward speech. These statements included: “I like to talk,” “I speak to my family, teachers, and friends,” and “I
have a good voice.” There were no negative statements at this measurement. Otherwise all of his remaining first phase scores ranged from 0 to -3.

Figure 1 Differences in “total” scores between phases

Phases B and A₂ show relatively stable scores ranging from 0 to -3 and 0 to -2, respectively. Figure 2 shows the data with the outlier removed. Despite the relatively stable trends during phases B and A₂, the overall data indicate that the “emotion worksheet” as applied in this study was not a reliable measure to accurately identify changes in an adolescent child’s emotional reaction to his speech.

Figure 2 Differences in “total” scores between phases without outlier

Efficacy

For each journal entry, the participant’s negative, positive, and “total” scores are listed in Figures 4-6 of Appendix D. As seen in Figure 2, the “total” score ranges from 0
to -3 during the first baseline. There appears to be a trend for the child’s attitude to worsen from the first two sessions that were rated 0 to the last two sessions that were rated -3 and -2. The first two sessions of the B phase remain low (-2 and -3) suggesting that the introduction of the actor-emotion strategy did not have an immediate positive effect. His attitude appears to improve during the next two sessions but then returns to a lower level. In general, it appears that there was little change from the first baseline phase through the treatment phase. This view of the data was confirmed by the results of the t-test comparison. The mean of the first A phase was -1.5 (S.D. = 1.2) while the mean of the B phase was -2.2 (S.D. = 1.0). This difference was not statistically reliable (t(12) = 1.144, p<0.275).

Withdrawal of the treatment in the second baseline phase also appeared to result in little change. The average score in A2 phase was -1.7 (S.D. = .8). The average was not reliably different from the B phase (t(10) = -0.958, p<0.360).

In summary, these data indicate that the actor-emotion strategy as applied in this study was not an effective intervention technique for altering the child’s emotional reaction to his speech.

**Overall Change**

Figure 3 displays the participant’s changes in attitude about stuttering, as demonstrated by the number of negative statements about speech selected. At pretest, nineteen negative statements about speech were selected. At posttest, eighteen negative statements about speech were selected. In a study on Belgian children (De Nil and Brutten, 1991) the mean score of a group of children who stutter was 16.7 (N=70, S.D. = 7.29); mean score of a group of children who do not stutter was 8.71 (N=271, S.D. = 5.53). Compared to this study, the number of negative speech attitude statements was not significantly different between pretest and posttest measures.
Table 2 presents changes in percentages of syllables stuttered pretest and posttest. There was a decrease in total percentages of syllables stuttered at posttest compared to pretest across all speaking situations. There were no differences among severity levels.

Table 2

**Systematic Disfluency Analysis Summary: Frequency Analysis**

<table>
<thead>
<tr>
<th></th>
<th>Monologue</th>
<th>Dialogue</th>
<th>Oral Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest</td>
<td>Posttest</td>
<td>Pretest</td>
</tr>
<tr>
<td>More Typical</td>
<td>7%</td>
<td>9%</td>
<td>5%</td>
</tr>
<tr>
<td>Percentages</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less Typical</td>
<td>28%</td>
<td>23%</td>
<td>25%</td>
</tr>
<tr>
<td>Percentages</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Percentages</td>
<td>35%</td>
<td>32%</td>
<td>30%</td>
</tr>
<tr>
<td>Severity Rating</td>
<td>Severe</td>
<td>Severe</td>
<td>Severe</td>
</tr>
</tbody>
</table>

**Descriptive Results**

Descriptive results showed many behavior changes displayed by the participant from pretest to posttest. At pretest, the participant demonstrated many avoidance behaviors. When asked a question, he would break eye-contact and look into his lap until someone else answered the question. This behavior gradually diminished and was not seen during the last week of therapy. The participant was also beginning to initiate
questions and volunteer to answer other questions. This is evidence of qualitative speech improvements. The participant’s volume also improved throughout the semester. In his most recent previous semester and at the beginning of the camp, the participant’s intelligibility was negatively impacted by his low speaking volume. This issue was addressed and the participant spoke with an increased volume. When he said his lines in the play at the end of the camp, his speech volume was sufficient for the audience to hear him.
CHAPTER 4
DISCUSSION

The purpose of the current study was to investigate the efficacy of an actor-emotion technique to change communication attitudes in an adolescent child who stutters. The following chapter is divided into four sections. The first section discusses the results of the research questions that guided the study, the next session discusses the implications of the research, the third section discusses the limitations of the data, and the fourth section offers suggestions for future studies.

Interpretation of the Results

The first research question examined the stability and reliability of a worksheet-based measure of emotionality. Results showed that the “emotions worksheet” was relatively unreliable on a daily basis during phase A, but displayed relatively stable trends during phases B and A2. Future use and development of this measurement tool should determine if there is an initial period during which it is unreliable. During the first week of camp, it is possible that there could have been confusion regarding instructions for filling out the “emotions worksheet.” The participant could have felt timid, unsure, and afraid to ask questions. As time progressed, instructions would have become clear, a routine would have been established, and the participant would have expected the worksheet and been able to prepare mentally. This development of comfort may explain the increase in reliability as therapy progressed.

The second research question focused on the effectiveness of the actor-emotion strategy to improve communication attitude. It was proposed that the adolescent child would write more positive statements toward speech during phase B, when the actor-emotion strategy was implemented, indicating a more positive attitude about speech. The findings from the statements recorded on the “emotions worksheet” did not show a
statistically significant change in communication attitude from phase A to phase B, nor from phase B to phase A₂. The scores on the Communication Attitude Test did not show a statistically significant change in communication attitude from pretest to posttest. This outcome follows the postulation that attitude is slow to change but is subsequently more likely to be maintained, whereas stuttering behavior may change quickly but is difficult to maintain (Conture, 1983).

The study by Blood (1995) also confirms this postulation. At the 12-month follow-up Erickson scores were reduced dramatically and confidence levels increased significantly for all three participants. However, participants received intervention for a 6-month period, suggesting an extensive amount of time is needed to make changes in communication attitude. Changes in percent of syllables stuttered were seen after only 10-16 sessions, confirming how quickly stuttering behaviors may change.

Descriptive results showed that the participant reduced the amount of avoidance behaviors and increased his confidence, as indicated by the changes in his body language and social behaviors he displayed throughout the camp.

Implications of the Research Findings

The findings of the current study would suggest that fluency shaping therapy alone does not improve communication attitude. Some clinicians give little attention to changing feelings and attitudes because they believe that if the child’s fluency improves the negative feelings will also improve (Ryan, 1984). However, because the current study incorporated a mixture of fluency shaping and stuttering modification techniques on a daily basis, results should have indicated an upward trend in the number of positive statements made by the participant in phases B and A₂. This result would have suggested an increase in communication attitude by itself, without any effects from the actor-emotion strategy.
Limitations of the Study

One limitation of the current work is there was only one participant that was analyzed in this study. As a result, the results may not have been representative of the entire population of adolescents who stutter. This limits the generalization of the strategy to other children. Replication with a larger sample size and longer period of intervention would be required to determine if children and/or adolescents who stutter would benefit from the actor-emotion strategy.

Another limitation in this study is the number of clinicians involved in administering the treatment program. Due to time conflicts and other obligations, one clinician lead the fluency camp on Mondays and Wednesdays, while another clinician lead on Tuesdays and Thursdays. Although all of the clinicians attended a collaborative meeting and lesson plans were approved, there is still a variability factor within the clinicians and their methods.

Another limitation is that only one communication attitude test was used to measure changes in the participant’s communication attitude at pretest and posttest. It is possible there may have been a significant change in the participant’s communication attitude that was not picked up by the Children’s Attitude Test (CAT), but may have been seen when compared to multiple communication attitude tests.

Another limitation is the reliability of the “emotions worksheet” to accurately measure emotionality from day-to-day.

Suggestions for Future Research

Suggestions for future research include examining different length and duration schedules for presenting the training, increasing the size of the sample group, use of communication attitude tests with high reliability, use of different journal rating scales
and/or types of journals used to measure and compare changes in communication attitude on a daily basis.
REFERENCES


# APPENDIX A

## ACTIVITIES FOR PHASE A

<table>
<thead>
<tr>
<th>Day</th>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1</td>
<td>Introductions</td>
<td>Clinicians and clients introduced themselves. Clinicians and clients participated in a low-pressure activity in which speaking requirements were minimal.</td>
</tr>
<tr>
<td></td>
<td>Group discussion of stuttering</td>
<td>Clinicians prompted questions such as “What are some kinds of disfluent speech?” “When does it happen?” “What do you do when you stutter?”</td>
</tr>
<tr>
<td></td>
<td>Group discussion of theater</td>
<td>Clinicians prompted questions such as “Who has been to a theater?” “What did you see?” “Have you ever been in a play?” “What was your role?”</td>
</tr>
<tr>
<td>Day 2</td>
<td>Speech Mechanism</td>
<td>Parts of the body and their roles in speech production were discussed. Clients practiced producing tense vs. “easy” speech.</td>
</tr>
<tr>
<td></td>
<td>Tense vs. lax muscles</td>
<td>The group performed a progressive muscle relaxation exercise of the body.</td>
</tr>
<tr>
<td></td>
<td>Diaphragmatic breathing</td>
<td>Clients practiced diaphragmatic breathing while practicing phonation of /i/, alternating between shallow and deep breathing, noting differences such as longer, louder, or softer.</td>
</tr>
<tr>
<td></td>
<td>Tense-to-lax pantomime</td>
<td>Clients pretended to pass a ball around, and with each catch the ball became lighter or heavier. The clients were then instructed to say “catch” when they caught the ball with a tense or relaxed “voice box.”</td>
</tr>
<tr>
<td>Day 3</td>
<td>Review of speech mechanism</td>
<td>Clients volunteered to draw the body parts needed for speech production.</td>
</tr>
<tr>
<td></td>
<td>Review of diaphragmatic breathing</td>
<td>Clients practiced diaphragmatic breathing while lying supine on the floor with knees bent, feeling the swell and fall of the diaphragm.</td>
</tr>
<tr>
<td></td>
<td>Guided Imagery</td>
<td>The clients were instructed to close their eyes and concentrate on their five senses to experience the story as they were taken along a “trip”.</td>
</tr>
<tr>
<td>Day 4</td>
<td>Review of speech mechanism</td>
<td>Clients recalled and labeled body parts on a diagram. Clients also recalled methods for reducing tension.</td>
</tr>
<tr>
<td></td>
<td>Guided Imagery</td>
<td>The clients were lead through guided imagery focusing on traveling from a warm location to a cold location.</td>
</tr>
<tr>
<td></td>
<td>Freeze-Role play/Improvisation</td>
<td>Two clients were selected to perform a scene. When the director said “Freeze” the clients were to remain still and one performer was switched with another client. A new scene was given to enact. Clients discussed what the “freeze” felt like: Did it disrupt the flow of the scene? Did it make you feel silly?</td>
</tr>
<tr>
<td></td>
<td>Holding on to the moment of stuttering</td>
<td>Clients discussed and practiced holding on to the moment of stuttering.</td>
</tr>
<tr>
<td>Day 5</td>
<td>Review of speech mechanism</td>
<td>Clients acted as the “teacher” to teach the parts of the speech mechanism.</td>
</tr>
<tr>
<td>--------</td>
<td>------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Review of “freezing”</td>
<td>Clients discussed and practiced the “freezing” technique. Clients reviewed 3 types of stuttering: prolongations, blocks, revisions.</td>
</tr>
<tr>
<td></td>
<td>Genre/Rate</td>
<td>Clients acted out a football scene in “fast forward” and “slow motion.”</td>
</tr>
<tr>
<td></td>
<td>Rate</td>
<td>Clients discussed doing things slowly and quickly. Clients practiced reciting sentences written on the dry erase board in “fast forward” and “slow motion.”</td>
</tr>
<tr>
<td>Day 6</td>
<td>Stage areas/positions</td>
<td>Clients were taught stage areas and positions.</td>
</tr>
<tr>
<td></td>
<td>Voice</td>
<td>Each client sung nursery rhymes using different vocal qualities (loud, soft, high, low). Each client was given a chance to play a drum and change the beat of the nursery rhyme. Clients were able to see how the beat of the drum affected the disruption of their voice.</td>
</tr>
<tr>
<td>Day 7</td>
<td>Review of disfluencies, rate, and voice</td>
<td>The following words were placed on a board: repetition, prolongation, block, fast, slow, high pitch, low pitch, soft and loud. Using a game spinner, clients took turns performing each speech activity.</td>
</tr>
<tr>
<td></td>
<td>Storyboard</td>
<td>Clients discussed the elements needed for a good story.</td>
</tr>
<tr>
<td></td>
<td>Guided story production</td>
<td>Each client read aloud a short story and identified the story elements.</td>
</tr>
<tr>
<td>Day 8</td>
<td>Appearance, voice, personality</td>
<td>Clients discussed how appearance, voice, and personality make up different characters, and how they can be changed by actors.</td>
</tr>
<tr>
<td></td>
<td>Improvisation</td>
<td>Each client acted out a character (i.e. an old lady). The other clients identified the character and discussed which aspects about the personality, voice, and appearance gave away the character.</td>
</tr>
<tr>
<td></td>
<td>“No, you can’t take me!”</td>
<td>Each client was given the role of a body part needed for speech. The lead clinician would say “I’ll take this part away”-the client responded with “No, you can’t take me!” – the clinician asked “Why not?”- the client had to respond with the importance of the body part they were performing.</td>
</tr>
<tr>
<td>Day</td>
<td>Activity</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>---------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Day 1</td>
<td>Introduction of emotions</td>
<td>Clients discussed emotions (happy, sad, neutral, scared, angry, ashamed) they have felt in various situations, including when we talk.</td>
</tr>
<tr>
<td></td>
<td>The Emotions Game</td>
<td>Each client read aloud a scenario and was instructed to say how it made them feel while providing an appropriate facial expression (i.e. ‘someone lied to me and I feel angry’ - with angry expression).</td>
</tr>
<tr>
<td></td>
<td>Worry Ladder</td>
<td>Clients discussed what they were afraid of and rated their fears using the “worry ladder.” Clients also discussed why they were sometimes afraid to speak in front of people.</td>
</tr>
<tr>
<td></td>
<td>Situation Handouts</td>
<td>Each client read a problem out loud and discussed alternative ways to handle the situation.</td>
</tr>
<tr>
<td>Day 2</td>
<td>Review</td>
<td>Clients reviewed 3 types of stuttering: prolongations, blocks, revisions. Clients discussed which negative emotions they have felt while stuttering: fear, apprehension, anger, frustration, embarrassment, and shame.</td>
</tr>
<tr>
<td></td>
<td>Vocalizing Emotions</td>
<td>Clients performed scenarios using only one emotion throughout the performance.</td>
</tr>
<tr>
<td>Day 3</td>
<td>“Value” of fluency</td>
<td>Clients discussed what price they would be willing to pay to be “fluent.” “If there was a pill you could take, what side effects would you tolerate?” “If you could trade your problem for someone else’s, what would you trade?”</td>
</tr>
<tr>
<td></td>
<td>Character emotions</td>
<td>Clients reviewed emotions associated with stuttering while decorating their mask to use during role playing.</td>
</tr>
<tr>
<td></td>
<td>Job interview</td>
<td>“Hand signals” were discussed beforehand as to how the director would “modify” the clients’ acting during the activity. The hand signals represented holding on to the moment with easy release, cancellations, and pull-outs. Each client was given a profession to act out during an interview. The interview was performed twice: once in normal character and a second time using emotions throughout the interview.</td>
</tr>
<tr>
<td>Day 4</td>
<td>Body movement &amp; emotion: Statue scenes</td>
<td>One client pretended to be “clay” and another to be the “sculptor.” The “sculptor” positioned the other person’s arms and legs in an action pose and moved his lips and eyes to portray an emotion. Clients took turns acting out each role and identifying the action and emotion portrayed.</td>
</tr>
<tr>
<td></td>
<td>Easy Onsets</td>
<td>The client practiced using easy onsets in isolated words and phrases.</td>
</tr>
<tr>
<td></td>
<td>Reading task</td>
<td>The clients practiced reading paragraphs aloud using easy onsets when possible.</td>
</tr>
<tr>
<td>Day 5</td>
<td>Review</td>
<td>Clients discussed theater and stuttering vocabulary learned thus far.</td>
</tr>
<tr>
<td>-------</td>
<td>--------</td>
<td>---------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Action!</td>
<td>Clients visited the LSU Union Theater and acted out their own “made up” characters while focusing on emotions.</td>
</tr>
<tr>
<td></td>
<td>Prep Sets</td>
<td>Prep-sets were compared to rehearsals used by actors to prepare for their performances. Prep-sets were used to encourage fluent speech with additional time given to the clients to formulate appropriate responses.</td>
</tr>
<tr>
<td>Day 6</td>
<td>Feelings/Emotions</td>
<td>A game board was used to facilitate discussions and role-playing using emotions. Clients would perform the action presented on the game space they landed on (i.e. ‘make a happy face’ ‘name a time you felt scared’ ‘how would you feel if your friend called you a baby?’)</td>
</tr>
<tr>
<td></td>
<td>Role Play</td>
<td>Clients were given two scripts to review and prepare for their performance for the other clients. Each script deals with expressing feelings, but will allow clients to express feelings as characters.</td>
</tr>
<tr>
<td></td>
<td>Cancellations</td>
<td>Clients were introduced to cancellations and practiced the technique using scripts from the above activity.</td>
</tr>
<tr>
<td>Day 7</td>
<td>Who am I?</td>
<td>A card was presented for everyone to see except the “guesser.” The other clients gave clues about the person written on the card so that the guesser could figure out who was written on the card.</td>
</tr>
<tr>
<td></td>
<td>Feared words</td>
<td>Clients read a passage and highlighted words they thought they might stutter on. Clients were taught to prolong the initial consonant of a word they might stutter on to make it easier to “slide” into the word.</td>
</tr>
<tr>
<td></td>
<td>Problem Solving</td>
<td>Clients were given a problematic situation to act out twice, each time with a different solution to the problem. After both performances, clients discussed which solution worked best.</td>
</tr>
</tbody>
</table>
## APPENDIX C

### ACTIVITIES FOR PHASE A₂

<table>
<thead>
<tr>
<th>Day</th>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1</td>
<td>Phone etiquette</td>
<td>Clients discussed general conversation guidelines such as using a greeting, allowing for turn-taking, and using a closing comment to end the conversation.</td>
</tr>
<tr>
<td></td>
<td>Telephone</td>
<td>Clients were given telephone situations which they had to act out using a cell phone. The focus of the exercise was to identify and implement cancellations when bumpy speech was present.</td>
</tr>
<tr>
<td></td>
<td>Pick-a-path</td>
<td>Clients picked which familiar story they wanted to alter for the end-of-the-camp play and began to brainstorm what aspects would be changed.</td>
</tr>
<tr>
<td>Day 2</td>
<td>Card Game</td>
<td>Clients read questions from cards, such as “What would you say if…” and answered the question. If disfluencies occurred, the clients would discuss which strategy would work best in that situation.</td>
</tr>
<tr>
<td></td>
<td>Japanese Theater</td>
<td>Each client enacted a scene without using props.</td>
</tr>
<tr>
<td></td>
<td>Final performance</td>
<td>Clients began to organize their new version of the Three Little Pigs.</td>
</tr>
<tr>
<td>Day 3</td>
<td>Who am I?</td>
<td>A card was presented for everyone to see except the “guesser.” The other clients gave clues about the person written on the card so that the guesser could figure out who was written on the card.</td>
</tr>
<tr>
<td></td>
<td>Picture game</td>
<td>Clients reviewed easy onsets, light contacts, and cancellations. Clients took turns drawing a picture card and describing the picture. The other clients had to guess what was being described.</td>
</tr>
<tr>
<td></td>
<td>Final performance</td>
<td>Clients began to write the script of their new version of the Three Little Pigs.</td>
</tr>
<tr>
<td>Day 4</td>
<td>How well do you know your friends?</td>
<td>Clients wrote down their name and a deep, dark secret (real or fake). The “host” read a secret out loud with the name shown to everyone else. The other clinicians gave clues about which friend the secret belonged to, to see if the “host” would guess correctly.</td>
</tr>
<tr>
<td></td>
<td>Practicing scripts</td>
<td>Clients practiced reading their lines out loud, paying attention to “hand signals” which represented which strategy to use to create smooth speech.</td>
</tr>
<tr>
<td>Day 5</td>
<td>Talk Show</td>
<td>Each client took turns answering questions based on the character they would be playing in “The 3 Hillbillies.”</td>
</tr>
<tr>
<td></td>
<td>Clinicians and client switch roles</td>
<td>Clients were given the opportunity to play “teacher” and taught the clinicians everything they knew about stuttering.</td>
</tr>
<tr>
<td></td>
<td>Rehearsal/Prop work</td>
<td>Clients rehearsed their lines concentrating on memorizing their lines, using props-stage space, and voice changes.</td>
</tr>
<tr>
<td>Day 6</td>
<td>Actor’s Review</td>
<td>Clients watched a video of the previous day’s rehearsal. The video was stopped periodically and the clients discussed changes that should be made to improve on their acting skills. Clients also identified moments of stuttering and discussed which strategy should have been used.</td>
</tr>
<tr>
<td>Dress Rehearsal</td>
<td>Clients practiced their roles in the play in costume and using props. Clients reviewed which hand signals would be used during the rehearsal to facilitate fluency techniques.</td>
<td></td>
</tr>
<tr>
<td>Action!</td>
<td>After a break, clients performed their new version of The 3 Hillbillies to parents, friends, and faculty.</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX D

RESULTS

<table>
<thead>
<tr>
<th>Negative scores</th>
<th>Positive scores</th>
<th>“Total” scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>-2</td>
<td>0</td>
<td>-2</td>
</tr>
<tr>
<td>-2</td>
<td>1</td>
<td>-1</td>
</tr>
<tr>
<td>-1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>-3</td>
<td>0</td>
<td>-3</td>
</tr>
<tr>
<td>-3</td>
<td>1</td>
<td>-2</td>
</tr>
</tbody>
</table>

Figure 4 Negative, positive, and “total” scores for Phase A

<table>
<thead>
<tr>
<th>Negative scores</th>
<th>Positive scores</th>
<th>“Total” scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>-3</td>
<td>1</td>
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<tr>
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<td>-3</td>
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</tbody>
</table>

Figure 5 Negative, positive, and “total” scores for Phase B

<table>
<thead>
<tr>
<th>Negative scores</th>
<th>Positive scores</th>
<th>“Total” scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>-2</td>
<td>0</td>
<td>-2</td>
</tr>
<tr>
<td>0</td>
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</tr>
<tr>
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<tr>
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<tr>
<td>-2</td>
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<td>-1</td>
</tr>
<tr>
<td>-2</td>
<td>1</td>
<td>-1</td>
</tr>
</tbody>
</table>

Figure 6 Negative, positive, and “total” scores for Phase A₂
APPENDIX E

RECRUITMENT FLYER

Louisiana State University
Speech, Language, and Hearing Clinic
is offering a...

Fluency Day Camp

June 19-July 27, 2006
9:00-12:00
Monday-Thursday
Hatcher Hall
The LSU Speech, Language, and Hearing Clinic is offering a 6-week Fluency Day Camp this summer for upper elementary-to-middle school-aged children. This day camp will meet from 9:00-12:00 Monday-Thursday beginning June 19th and ending July 27th. Each child will attend an additional 1 ½ hour ongoing diagnostic session once weekly.

The Fluency Day Camp will incorporate both traditional fluency treatment methods as well as language-based treatment methods. Children attending the Day Camp will receive an ongoing, comprehensive speech and language assessment. Results of these ongoing assessments, as well as results of daily treatments, will be compiled into a comprehensive report at the end of the summer semester.

The theme of the 2006 Summer Fluency Day Camp is “Theatre!” In addition to traditional speech-language intervention, children will be instructed in the techniques used by stage actors that enhance communication skills in a variety of domains. A small performance will be presented to the parents at the end of this day camp experience!

Interested participants should complete the application form and mail or fax this form to the LSU Speech, Language, and Hearing Clinic. Please respond promptly; only a limited number of spots are available! Applicants will be notified of acceptance no later than June 1st.

Fees for the summer camp are $175.00 per child and will be collected on the first day of camp.

LSU Speech, Language, & Hearing Clinic
63 Hatcher Hall
Baton Rouge, LA 70803
Phone: (225) 578-9054
Fax: (225) 578-2995

For additional information regarding this summer program, please contact Ginger Collins:
Phone: 578-3382
E-mail: ginger@mammothcomputers.com
APPENDIX F

FLUENCY CAMP APPLICATION

Child’s Name_____________________________________________

Date of Birth ________________ Age ___________

Parent or Guardian _________________________________________________

Address __________________________________________________________________

Phone (_____)_____________Cell (_____)_____________ Other (_____)____________

Email __________________________________________________________________

School________________________________  Grade ____________

Who referred you?/How did you hear about the Fluency Day Camp? ______________

How would classify this child’s stuttering? (please circle)  Mild    Moderate    Severe   Profound

Does this child have other co-existing speech or language problems, such as difficulty
pronouncing sounds, difficulty expressing him or herself, difficulty understanding instructions, or
difficulty reading or writing?   YES   NO

If yes, please state:

Is this child able to attend every Monday, Tuesday, Wednesday, and Thursday from 9:00-12:00
during June 18th-July 27th?    YES   NO

If no, please list any dates during this time that the child will NOT be able to attend (ex- family
vacation, 4th of July holiday, etc.).

Please place an X in the day/time slot that your child will be available for ongoing testing- he or
she will only be required to attend ONE 1 ½ hour session per week:

<table>
<thead>
<tr>
<th></th>
<th>1:00-2:30</th>
<th>2:30-4:00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuesday</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wednesday</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thursday</td>
<td></td>
<td></td>
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</tbody>
</table>
APPENDIX G

COMMUNICATION ATTITUDE TEST

1. I don't talk right                              True    False
2. I don't mind asking the teacher a question   True    False
   in class
3. Sometimes words will stick in my mouth       True    False
   when I talk
4. People worry about the way I talk            True    False
5. It is harder for me to give a report in class True    False
   than it is for most of the other kids
6. My classmates don't think I talk funny       True    False
7. I like the way I talk                        True    False
8. People sometimes finish my words for me      True    False
9. My parents like the way I talk               True    False
10. I find it easy to talk to most everyone     True    False
11. I talk well most of the time                True    False
12. It is hard for me to talk to people         True    False
13. I don't talk like other children            True    False
14. I don't worry about the way I talk          True    False
15. I don't find it easy to talk                True    False
16. My words come out easily                    True    False
17. It is hard for me to talk to strangers      True    False
18. The other kids wish they could talk like me True    False
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>19. Some kids make fun of the way I talk</td>
<td>True</td>
</tr>
<tr>
<td>20. Talking is easy for me</td>
<td>False</td>
</tr>
<tr>
<td>21. Telling someone my name is hard for me</td>
<td>False</td>
</tr>
<tr>
<td>22. Words are hard for me to say</td>
<td>False</td>
</tr>
<tr>
<td>23. I talk well with most everyone</td>
<td>False</td>
</tr>
<tr>
<td>24. Sometimes I have trouble talking</td>
<td>False</td>
</tr>
<tr>
<td>25. I would rather talk than write</td>
<td>False</td>
</tr>
<tr>
<td>26. I like to talk</td>
<td>False</td>
</tr>
<tr>
<td>27. I am not a good talker</td>
<td>False</td>
</tr>
<tr>
<td>28. I wish I could talk like other children</td>
<td>False</td>
</tr>
<tr>
<td>29. My words do not come out easily</td>
<td>True</td>
</tr>
<tr>
<td>30. My friends don't talk as well as I do</td>
<td>False</td>
</tr>
<tr>
<td>31. I don't worry about talking on the phone</td>
<td>False</td>
</tr>
<tr>
<td>32. I talk better with a friend</td>
<td>False</td>
</tr>
<tr>
<td>33. People don't seem to like the way I talk</td>
<td>False</td>
</tr>
<tr>
<td>34. I let others talk for me</td>
<td>False</td>
</tr>
<tr>
<td>35. Reading out loud in class is easy for me</td>
<td>False</td>
</tr>
</tbody>
</table>
APPENDIX H

EMOTIONS WORKSHEET
VITA

Tiffany Marie Scavo was born and raised in Metairie, Louisiana. She received her Bachelor of Arts degree in communication disorders from Louisiana State University in May 2005. She entered graduate school in August 2005 to pursue a Master of Arts degree in communication disorders. Upon completion of her master’s degree in May 2007, she plans to work in a medical setting as a speech-language pathologist and aspires to enter a doctorate program in hopes of teaching at the University level.