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Anxiety-Reducing Strategies in the Classroom

Robin K. Buchler

Western Michigan University, buchler65@msn.com

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ANXIETY-REDUCING STRATEGIES
IN THE CLASSROOM

by

Robin K. Buchler

A dissertation submitted to the Graduate College
in partial fulfillment of the requirements
for the degree of Doctor of Philosophy
Educational Leadership, Research and Technology
Western Michigan University
August 2013

Doctoral Committee:

Patricia L. Reeves, Ed.D., Chair
Louann A. Bierlein-Palmer, Ed.D.
Patrick D. Bird, Ph.D.
ANXIETY-REDUCING STRATEGIES
IN THE CLASSROOM

Robin K. Buchler, Ph.D.
Western Michigan University, 2013

This case study research explored how sixth grade students experience and respond to anxiety prior to, during, and after receiving 10 sessions of instruction in anxiety-reducing strategies in the classroom compared to a group of similar students who do not receive instruction in anxiety-reducing strategies in the classroom. Three research-based strategies were taught: (a) progressive muscle relaxation, (b) breathing exercises, and (c) positive self-talk. Qualitative data were collected through journals the students kept, pre-questionnaires and post-questionnaires, observation notes, and field notes. Four strong themes, in the words of the students, were identified: (a) “I like it” – demonstrating autonomy; (b) “I don’t like it” – demonstrating disaffiliation; (c) “I don’t need it” – demonstrating self-advocacy; and (d) “It doesn’t work for me” – demonstrating resignation.

The strongest theme that emerged from the study was “I like it” (autonomy). The data collected from the journals and the pre-questionnaires and post-questionnaires, as well as the observation notes and the field notes, showed that students who participated in the classes with instruction on the three research-based anxiety-reducing strategies experienced positive change in their ability to control anxiety during anxiety-producing situations by using one or more of the strategies.
ACKNOWLEDGMENTS

I would like to begin by acknowledging and thanking my committee members, Dr. Patricia L. Reeves, Dr. Louann A. Bierlein-Palmer, and Dr. Patrick D. Bird, for your expertise and commitment in helping me through my journey. Thank you for not “stealing my struggle” but instead offering ongoing encouragement, advice, and support.

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Most importantly, I would like to thank my husband, Matt. Matt, there were times when you felt we were both getting our Ph.D. Thank you for taking this journey with me. Thank you for your love, patience, support and for taking care of our boys and our house so I could focus on my writing. I love you dearly. To my boys, Jonas and Logan, thank you for all the times you waited for me to finish a section before we could go do something fun together! You have both been so supportive and I hope through this experience, you, too, will become life-long learners. I love you both very much!

Robin K. Buchler
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CHAPTER I
INTRODUCTION

Anxiety disorders are among the most prevalent childhood psychological disorders experienced by 10 to 21% of children today (Ford, Goodman, & Meltzer, 2003; Costello, Mustillo, Erkanli, Keeler, & Angold, 2003). They are considered to be one of the most common and wide-spread mental illnesses, with approximately 40 million adults, worldwide, age 18 and older, suffering from cases of excessive or overbearing levels (Anxiety Disorders Association of America, 2010; Park, 2011; Rachman, 2004). With its frequency and the potential for multiple negative consequences, anxiety disorders have been named “one of the greatest health problems . . . in terms of global burden of disease” (Murray & Lopez, 1996).

As outlined in the Diagnostic and Statistical Manual of Mental Disorders (DSM–IV–TR) (American Psychiatric Association, 2000), anxiety is a natural reaction and a necessary warning response in humans. It can become a serious disorder when it is excessive and uncontrollable, when there does not seem to be any reason for it, and when it begins to show itself through a variety of physical and affective symptoms, as well as slight to severe changes in cognitive abilities and behavior. Larson, El Ramahi, Conn, Estes, and Ghibellini (2010) describe anxiety as an anticipated belief of a psychological distress which is a result of a perception of a disconcerting and potentially dangerous event. Studies have shown that anxiety and stress can negatively affect the physical and emotional state of children and adolescents and can develop into many challenging issues
such as school absenteeism, low self-concept, verbal and nonverbal problems, deficiencies in academic performance, behavioral problems, difficulty with peer relationships, heightened dependence, adult attention seeking behaviors, and decreased levels of concentration and attention (Allen & Klein, 1996; McLoone, Hudson, & Rapee, 2006; Orth, 2011). If left untreated, anxiety and stress can turn into more serious medical issues such as high blood pressure, heart disease, obesity, and depression.

Adolescence is a critical period where significant developmental changes occur. The brain develops in the area that governs both emotional and executive functioning, making it vulnerable to genetic risks of mental illness (Rockhill et al., 2010). As the cognitive and psychosocial maturation occurs, teens begin to increase the importance of friends over family. In addition, they start searching for their individuality, yet at the same time, work to fit in with their peers. It is a normal reaction to worry about school performance, relationships, and their future. Many of the everyday experiences of school children and adolescents can increase stress and cause anxiety. It becomes a serious problem when the anxiety increases to the point of taking over every day experiences and unnatural responses. With increased incidents of anxiety and its manifested health issues, it is critical that children and adolescents are taught to manage their anxiety and stress so they can reduce the risk of long-term health concerns (Orth, 2011). People who have a part in the supervision, well-being, and emotional growth of children and adolescents need to be able to recognize anxiety disorders and when possible, provide adequate treatment in a setting that will reach the most children.

This challenging disorder has been studied for centuries. Anxiety has been called by many names over the centuries. Anxiety hysteria or globus hystericus, nervous
exhaustion, soldier’s heart or Da Costa’s Syndrome, and phobic-anxiety-depersonalization syndrome (Van Valkenburg, 2008) are just a few that have been noted to represent anxiety in past studies. Newer names associated with or interchanged for anxiety are school phobia (Chartier, Walker, & Stein, 2001; Tyrrell, 2005), social anxiety disorder or social phobia (Gren-Landell et al., 2008), school refusal (Corville-Smith, Ryan, Adams, & Dalicandro, 1998; Fremont, 2003; Hughes, Gullone, Dudley, & Tonge, 2009; Kearney, 2007; Reid, 1983), and school belongingness (Johnson, 2009; Nichols, 2008; Singh, Change, & Dika, 2010; Xin, 2003). Along with these various names and labels, the Diagnostic and Statistical Manual of Mental Disorders (DSM–IV–TR) (American Psychiatric Association, 2000), provides a list of specified anxiety disorders, including (a) panic disorders, (b) specific phobias, (c) obsessive-compulsive disorders, (d) post-traumatic stress disorder, (e) acute stress disorder, and (f) generalized anxiety disorder. The most chronic and recurrent of the anxiety disorders is social phobia (Davidson, 2000). Generalized anxiety disorder is the most prevalent of anxiety disorders in primary care (Wittchen, 2002). About half of all children diagnosed with anxiety suffer from at least two forms of anxiety disorders (Rachman, 2004).

**Problem Statement**

With increased incidents of anxiety and its manifested health issues, it is critical that educators teach children and adolescents to manage their anxiety and stress so they can reduce the risk of long-term health concerns (Orth, 2011). Approximately 1 in 5 children in the United States suffers from some degree of an anxiety disorder (National Institute of Mental Health, 2008). Anxiety and the immediate need for treatment is a fast growing concern, not only for today, but for the future. Anxiety is becoming one of the
most common and wide-spreading mental illnesses. The need for treatment can no longer be ignored and the school setting is ideal for such treatment (Masia-Warner et al., 2005). Anxiety and stress can negatively affect the physical and emotional state of children and adolescents and can develop into many challenging issues such as school absenteeism, low self-concept, verbal and nonverbal problems, deficiencies in academic performance, increased difficulties with attention and concentration, behavioral problems, heightened dependence, adult attention-seeking behaviors, and difficulties developing peer relationships (Allen & Klein, 1996; Costello et al., 2003; Orth, 2011). Anxiety and stress can turn into more serious medical issues if left treated.

**Research Problem Statement**

There have been multiple research efforts examining the best treatments for anxiety. Clinical treatments for anxiety involves cognitive-behavioral therapy (Kendall, 1994; Suveg, Kendall, Comer, & Robin, 2006), emotional-focused cognitive behavioral therapy (Suveg et al., 2006), medication treatments (Roy-Bryne et al., 2002; United States Food and Drug Administration [U.S. FDA], 2007), or a combination of these (Craske et al., 2005). Alternative educational settings for this population have also been examined for efficacy in the treatment of anxiety in school-aged children and adolescents (Franklin, Streeter, Kim, & Tripodi, 2007; Rayle, 1998; Wilkins, 2008).

The research presented above has shown success for many anxious children and adolescents who received treatment in a clinical or alternative school setting. Yet research also shows that only one third of those needing treatment receive treatment (Rachman, 2004) and there was only a handful of studies that examined the experiences of the students, mostly in terms of their ability to identify physical symptoms that linked
to their anxiety (Muris, Hoeve, Meesters, & Mayer, 2004; Muris, Mayer, Vermeulen, & Hiemstra, 2007; Muris, Vermeer, & Horselenberg, 2008) or their experiences in alternative school settings (Rayle, 1998; Wilkins, 2008). There does not appear to be any research on the experiences of students with anxieties who are learning tools that will empower them to control their anxious reactions. This leaves a significant gap in the literature.

**Practical Problem Statement**

Traditionally, treating children and adolescents with anxiety has primarily been conducted in specialized centers, community health clinics, or with private psychologists working alongside concerned parents. It has only been recently that there has been a movement to utilize schools as a resource to assist in the treatment of children and adolescents with anxiety (Mifsud & Rapee, 2005). This movement is especially important knowing that only one third of people who struggle with anxiety actually seek treatment (Rachman, 2004). Many more children and adolescents would be reached before their anxiety manifests into serious life-long health issues by providing treatment in the classroom as part of the curriculum. Utilizing the environment and supports of a school, children and adolescents, who typically have no voice in the treatment of their anxiety and are dependent on adults to take notice and seek treatment, have a better chance of being heard on a regular basis. Barriers can be reduced or eliminated and their voices can begin to be heard when children are provided services and supports at school. School services can help avoid referral barriers, decrease the demographic barriers, such as the cost of the services, eliminate lengthy waiting lists, and help reduce the stigma and shame some children may feel when seeking help from a mental health service.
(McLoone, Hudson, & Rapee, 2006). By providing classroom embedded anxiety-reducing strategies, they are given a voice into their treatment and their response to their anxiety.

My study provides educators, administrators, and curriculum coordinators with valuable information when making curriculum decisions to best meet the unique needs of all students. It also provides a natural ongoing data collection tool for teachers to frequently assess students as to their well-being and understanding of their learning. Students today are our future tomorrow. Schools have to give them every opportunity to be successful and positive contributors to society. Schools have to give them an opportunity to share their experiences and their needs in their struggle with anxiety.

Eighty-six percent of the research studies reviewed for this investigation was quantitative and facilitated by adults to the children. My study was qualitative by nature, and examined whether anxiety-reducing strategies in the classroom are beneficial to all students as they deal with anxiety.

Three types of effective treatment for anxiety in children and adolescents in school are relaxation, deep breathing exercises, and positive self-talk. Relaxation has been studied and enhanced since it was first introduced in 1908. Dr. Edmund Jacobson, of Harvard University, began investigating the benefits of tensing and releasing various muscle groups for people with anxiety (Conrad & Roth, 2006). Jacobson believed a person could not be simultaneously relaxed and tense at the same time (Margolis & Pica, 1990). Deep breathing, along with relaxation techniques, is a strategy that can be used by everyone to control anxious feelings (LaLande, Bambling, King, & Lowe, 2011; Nassau, 2007; Zuercher-White, 1998). It can be done anywhere without bringing attention to the
student. Modification of self-talk often goes hand-in-hand with various other treatments for anxiety. Students who have a higher ability to articulate their feelings and anxiety have found long-term benefit in being taught to replace negative self-talk with positive self-talk during anxious times (Gosch, Flannery-Schroeder, Mauro, & Compton, 2006).

**Purpose Statement and Research Questions**

The purpose of this case study was to understand how students experience and respond to anxiety after receiving instruction in anxiety-reducing strategies in the classroom compared to a group of similar students who do not receive instruction in anxiety-reducing strategies in the classroom. Sixth grade students were chosen for this study because at this age (11-13 year olds), anxiety tends to move from concrete specific fears to more abstract worries and interpersonal concerns (Masia-Warner et al., 2005) that can interfere with the learning process. A class developed specifically for sixth grade students, called Information Literacy, was chosen for this study because all sixth grade students have to take this class. The intent of this class was to fill the gaps of learning needed to gain mastery over skills that will be necessary to succeed at the secondary level. Topics such as note-taking, organization, purposeful reading, informational reading and writing, supporting writings with evidence, and team building exercises were taught. Teaching anxiety-reducing strategies fit perfectly into the intent of this class. This class was offered by two teachers each teaching five class periods a day to accommodate the 313 sixth grade students. For this study, one of the teacher’s classes of 154 sixth grade students participated in the anxiety-reducing strategies. The second teacher’s group of sixth graders was the control group. Both groups took a pre-
questionnaire about anxious situations and their responses to those situations and a post-questionnaire about anxious situations and their responses to those situations.

This study helps add new knowledge to the literature by examining anxiety in the classroom through the critical theory lens. By bringing a voice to the children and adolescents and empowering them with the necessary tools to bring power to their voice, educators and curriculum coordinators can be more informed when designing curriculum that meets the unique needs of all learners. The overarching question for this research study was: *How do sixth grade students experience and respond to anxiety prior to, during, and after receiving instruction in anxiety-reducing strategies that are embedded in the classroom?*

To fully explore this central research question, the following subquestions were also investigated:

1. How do sixth grade students describe their feelings and behaviors with anxiety before being taught anxiety-reducing strategies?
2. How do sixth grade students engage with and respond to the instruction on anxiety-reducing strategies during the anxiety-reducing lessons?
3. At the conclusion of the 10-lesson unit on anxiety-reducing strategies, how do sixth grade students assess their experience with the strategies and describe how they will use them in the future?
4. How do the sixth grade students who complete the 10-lesson unit on anxiety-reducing strategies compare to the control group who did not complete the 10-lesson unit, regarding the ways they describe responding to anxiety-producing situations in school?
Theoretical Foundation

Anxiety in children and adolescents has often been studied through the eyes of the adults interested or involved in the lives of said children. Various theories have been proposed to gain a better understanding of the experiences or effects of anxiety. One of the earliest theories used examined test anxiety was Drive Theory, proposed by Mandler and Sarason (1952). The researchers explained that the differences in performance were due to task-directed drives versus anxiety drives. The task-directed drives help the student attend to the test and the anxiety drives place the focus on self-directed, task-irrelevant behaviors that get in the way of attending to the test.

Another theory often used to explain anxiety and poor school performance was the Facilitating/Debilitating Anxiety Theory. This theory was developed in 1960 by Alpert and Haber. Furthering the proposed Mandler and Sarason’s Drive Theory, Alpert and Haber identified the task-directed behaviors as facilitating anxiety and the task-irrelevant behaviors as debilitating anxiety. This debilitating anxiety is now known as test anxiety.

In a 2005 study by Masia-Warner, Dent, Fisher, Alvir, Albano, and Guardino, Theory of Influence or Social Learning Theory was used to explain the effectiveness of school-based interventions on social anxiety. Knowing that few anxious youth actually receive treatment, by providing the services in the familiar setting of the school, barriers to the treatment could be circumvented. Forty-two high school students participated in this study. The participants had significantly greater reduction in anxiety than the control group at the end of the study. Sixty-seven percent of the participants no longer met the criteria for social anxiety at a nine-month follow-up. Offering treatment in a familiar
setting may make treatment more acceptable. Students who may never have received treatment now have hope for their future.

Theory of Mind was one of the lenses used to examine anxiety-related physical symptoms in a study by Muris, Vermeer, and Horselenberg (2008). Theory of Mind is a theory that explains the ability to interpret the feelings, thoughts, ideas, and intentions of others and use this knowledge to anticipate their behavior (Wellman, 2002). For a student with extreme anxiety, this is an important skill to keep from overreacting and having a panic attack. The researchers found that children, as young as 7 years old, had the ability to make casual inferences about the emotions of others and of themselves, and were able to link their physical symptoms to their anxiety. Piaget’s (1970) Theory of Development supports this ability at such a young age. According to Piaget, when a child reaches the cognitive developmental stage of concrete operations, he or she is increasingly able to link physical symptoms to psychological conditions such as anxiety.

It is important to give children and adolescents a voice and listen to their understanding and experiences of anxiety. The theoretical lens that will provide the deepest advocacy perspective for this study would be the Critical Theory. This theory is concerned with empowering a marginalized group of human beings to rise above the constraints that hold them back from a full life (Fay, 1987). Critical theorists are not just trying to understand and explain the phenomenon but are looking to change the situation. This can be done by first looking at the situation and then asking the people in this group to reflect on and question their current experiences and the value put on them (Giroux, 1988). Empowerment comes with control of a child’s anxiety in the school setting. Researchers have found that stress and anxiety can be reduced if the person perceives some degree of
control over his or her environment (Friedman, Lehrer, & Stevens, 1983). Children and adolescents with anxiety typically are not thought to be a marginalized group, nor has this theory been used when studying this mental illness. What makes them a marginalized group is their lack of a voice in their experiences and treatment. Treatment records support that anxiety disorders in children and adolescents often go undiagnosed, misunderstood, or dismissed as a phase of growing up (Masia-Warner et al., 2005). Assumptions need to be challenged in order to empower this population to take control of their anxiety and improve their lives.

**Methods Overview**

Educators have longed worked with children who have anxiety disorders and as such, have seen the frustrations with which children cope. What are missing are the voices of the children and adolescents who are deeply embedded in their anxiety. Control, at least to some degree, over their anxiety may be an answer to an easier life. In qualitative research, the researcher learns from the participants to understand the meaning of their lives (Marshall & Rossman, 2006). This approach allows an interpretative, naturalistic view of the world where the researcher can study things in their natural environment, attempting to make sense of a phenomenon and the meaning people attach to their experiences. Qualitative research brings a rich description of people’s individual and collective social actions, beliefs, thoughts, and perceptions (McMillan & Schumacher, 2006). It tends to be more open-ended, less specific, and evolving rather than static and process-oriented (McMillan, 2008). Qualitative researchers explore, discover, and construct the meaning using a wide-angled lens, with more constructivist claims to develop new knowledge.
To best explore, discover, and construct meaning of this phenomenon, a case study approach with a heavy emphasis on action research was used. This approach, along with a phenomenological style of interview questioning, was well-suited to investigations of lived experiences. A case study is an appropriate approach when the researcher has “clearly identified cases with boundaries and seeks to provide an in-depth understanding of the cases” (Creswell, 2007). The phenomenological interview style seeks to find essential meaning or essence of a particular phenomenon for a group or individual (Creswell, 2009). Specifically, this investigation attempted to understand how sixth grade students experience anxiety-reducing strategies that are embedded in the classroom.

Data were collected through ongoing journal writing, formal and informal observation of the three research-based anxiety-reducing strategies, and field notes were taken throughout the experience. Data were gathered utilizing students from a sixth grade content class. This study was examined from multiple perspectives. Using these specific data collections tools in this tightly bounded environment provided a sense of the condition before the implementation of the strategies, during the implementation of the strategies, and after the implementation of the strategies.

**Conceptual Framework**

The conceptual framework in Figure 1 displays the four main aspects of the study. The first aspect provides evidence of this major concern and the consequences if left untreated. Anxiety is the most common of all of the mental illnesses and, if left untreated, undiagnosed, or misdiagnosed, it can have life-long damaging consequences and negatively impact the quality of life of those who suffer. Children and adolescents,
Figure 1. Conceptual framework.
who are still at the stage of their lives where they depend on adult interventions and supports, are particularly vulnerable to a difficult journey through the school years. Low achievement, higher absenteeism, and health issues will affect their future opportunities.

The second aspect is the settings where treatment can be conducted. Two different settings for treatment are discussed and studied; a clinical setting and school setting. Clinical treatment has shown success; however, only about one third of those who suffer from anxiety actually get treatment, due to the stigma or cost of the treatment, as well as ignorance of the symptoms and characteristics. Studies show that the school setting is the ideal setting for such treatment. It is a familiar setting where treatment can be given at little or no cost, there are opportunities for treatment and interventions five days a week, parents and other educators can be educated at the same time, and there is less of a stigma for treatment since it can be embedded into the classroom from which all students may benefit.

The third aspect of this study is the specific strategies. These strategies and exercises will be breathing exercises, relaxation exercises, and positive self-talk. All of the strategies are research-based and have had consistent, ongoing success. All of the strategies provide opportunities for the locus of control to quickly be moved from the teacher, or interventionists, to the students.

The fourth aspect is the potential outcome of this study. By moving the locus of control to the students and providing them with tools for their anxiety-reducing toolbox, it is the hope that anxiety will be reduced, students will gain control of their anxiety, academics, social well-being, and future outlook will all improve.
The aim of this investigation was to learn through the eyes and experiences of the students, as they participate in classroom-embedded anxiety-reducing strategies. Providing the students with tools and strategies they can understand, practice, and implement, they will be more equipped to take the locus of control and use this new learning to handle their anxiety in ways that allow them to improve their outlook and be successful in their daily endeavors.

**Chapter I Summary**

Chapter I provided evidence to the ongoing issue of anxiety in school children today and the need to provide treatment and support within the school day. It included an overview of the issue, research and practical problem statements, significance of the study, the purpose statement, research questions, methodology overview, and a conceptual framework. Chapter II will review the current literature on anxiety including the limitations in the literature which supports this study.
CHAPTER II
LITERATURE REVIEW

Background

Definition and History

Anxiety is considered to be one of the most common and wide spreading mental illness, with approximately 40 million adults, worldwide, age 18 and older, suffering from cases of excessive or overbearing levels (Anxiety Disorders Association of America, 2010; Park, 2011; Rachman, 2004). As outlined in the Diagnostic and Statistical Manual of Mental Disorders (DSM–IV–TR) (American Psychiatric Association, 2000), anxiety is a natural reaction and a necessary warning response in humans. It can become a debilitating disorder when it is excessive, overbearing, and uncontrollable, when it requires no specific external stimulus, and when it begins to show itself through a wide variety of physical and affective symptoms, as well as changes in cognitive abilities and behavior. Studies have shown that anxiety and stress can negatively affect the body and emotions of children and adolescents and can develop into many challenging issues such as school absenteeism, low self-concept, verbal and nonverbal problems, deficiencies in academic performance, decrease in focus and concentration, behavioral problems, heightened dependence, adult attention seeking behaviors, and difficulties staying on task (Allen & Klein, 1996; Costello et al., 2003; Orth, 2011). If left untreated, anxiety and stress can turn into medical issues such as high blood pressure, heart disease, obesity, and depression. With increased incidents of
anxiety and its manifested health issues, it is critical that children and adolescents are taught to manage their anxiety and stress so they can reduce the risk of long-term health concerns (Orth, 2011). Larson et al. (2010) describe anxiety as an anticipated belief of a psychological distress which is a result of a perception of a disconcerting and potentially dangerous event. Between 8 and 27% of children and adolescents met the diagnostic criteria for an anxiety disorder sometime during their youth (Albano, Chorpita, & Barlow, 2003). Children who have a single diagnosis of an anxiety disorder are an exception. As many as 70 to 80% of children with anxiety have multiple anxiety disorder diagnoses (Brady & Kendall, 1992).

There are degrees resulting from different reactions and behaviors as with all human emotions. Typical anxiety happens when people react appropriately to a situation or event that causes anxiety. The first day at a new school or meeting in-laws for the first time would be examples of situations that may cause typical anxiety. Despite these anxious feelings and physical responses that accompany the event, most people are able to carry on and eventually feel comfortable in these once new situations. It is the response to the anxiety that is helpful or harmful, not the anxiety itself (Park, 2011). Anxiety at the level of an anxiety disorder would be disproportionately extreme, interfering with the ability to carry out everyday situations or activities (Adams, 2004). It is the unpredictability, uncertainty, and uncontrollable feelings that provoke anxiety to a level that basic functioning is interrupted (Park, 2011). Anxiety disorders are the primary reasons children and adolescents are referred for mental health services.

An anxiety disorder can be a disabling disorder when it becomes an excessive, irrational reluctance to everyday situations (Francesco, Mauro, Gianluca, & Enrico,
2009). It can be so intense and extreme that, in self-reports, patients describe it as a transcendental, unreal experience. They report feeling extremely nervous and doomed with what they perceive is about to happen. They see their surroundings as changing and menacing, and fear they do not have control of their bodies (Van Valkenburg, 2008).

This challenging disorder has been studied for centuries. Anxiety has been called by many names over the centuries. Anxiety hysteria or *globus hystericus*, nervous exhaustion, soldier’s heart or Da Costa’s Syndrome, phobic-anxiety-depersonalization syndrome (Van Valkenburg, 2008) are just a few that represent anxiety in past studies. Newer names associated with or interchanged for anxiety are school phobia (Chartier, Walker, & Stein, 2001; Tyrrell, 2005), social anxiety disorder or social phobia (Gren-Landell et al., 2008), school refusal (Corville-Smith et al., 1998; Fremont, 2003; Hughes et al., 2009; Kearney, 2007; Reid, 1983), and school belongingness (Johnson, 2009; Nichols, 2008; Singh et al., 2010; Xin, 2003). Along with these various names and labels, the *Diagnostic and Statistical Manual of Mental Disorders (DSM–IV–TR)* (American Psychiatric Association, 2000) provides a list of specified anxiety disorders, including (a) panic disorders, (b) specific phobias, (c) obsessive-compulsive disorders, (d) post-traumatic stress disorder, (e) acute stress disorder, and (f) generalized anxiety disorder. The most chronic and recurrent of the anxiety disorders is social phobia (Davidson, 2000). Generalized anxiety disorder is the most prevalent of anxiety disorders in primary care (Wittchen, 2002). Approximately half of all children diagnosed with anxiety suffer from at least two forms of anxiety disorders (Rachman, 2004).
Characteristics and Physical Symptoms

Anxiety disorders in children and adolescents often go undiagnosed or dismissed as a phase of growing up. Many experts believe that adult psychological disorders are a result of undiagnosed childhood disorders (Masia-Warner et al., 2005). Approximately 30% to 50% of adult sufferers reported childhood symptoms, poor academic performance, and lack of a social group when they were children (Christie, 2007). Children often react to their anxiety by internalizing their symptoms, for example, depression or shyness. By internalizing their symptoms unnoticed or undiagnosed. Other children have externalizing symptoms, such as hyperactivity, oppositional behaviors, or conduct problems. These students get the attention of their teachers, peers, and family members because they interfere with daily functioning, both at school and at home (Albano et al., 2003). The National Institute of Mental Health (2006) reported that the lifetime prevalence of 13 to 18 year olds is 25.1%, especially if the anxiety goes untreated. Educators and physicians are more in tune to what to look for with more and more attention being brought to childhood anxiety. Common characteristics of childhood anxiety disorder are

- excessive worries in general;
- panic attacks;
- misinterpretations of symptoms and events;
- negative and unrealistic thoughts;
- physiological arousal;
- hypersensitivity to physical cues;
• obsessive and/or compulsive behaviors; and

• fears and anxieties regarding specific situations or events (Merrell, 2001).

Muris (2004) and his team of researchers studied anxiety extensively and their multiple research studies have shed light on the physical symptoms of anxiety. Hands trembling, fast heart beats, sweating, nausea or abdominal discomfort, dizziness, hot flashes, chills, and difficulty breathing were common physical symptoms of anxiety with hand trembling, difficulties breathing, and fast heart beats the most common (Muris et al., 2004; Muris et al., 2007; Muris et al., 2008). In one of the studies by Muris et al. (2008), they investigated patterns in 171 children’s interpretation of anxiety-related physical symptoms and emotional reasoning in an effort to provide new knowledge for researchers to continue to explore physical symptoms-based theories in childhood anxiety. This study provided additional support for their previous 2007 study, where they found that cognitive development was a turning point to being able to interpret physical symptoms as a marker of anxiety. Children as young as 7 years old were increasingly capable of connecting physical symptoms to their anxiety (Muris et al., 2007). This new knowledge offered educators and clinicians valuable information for treatment and empowerment for the children. With this connection between physical symptoms and anxiety, providers can empower patients of all ages to have greater optimism for their own care, use their experiences and connections to help reduce anxiety associated with their condition, and give them a sense of control over life outcomes (Schieman, 1999).
Anxiety

Anxiety and Academics

Anxiety in school-aged children affects both their quality of life and their ability to benefit fully from their school experiences (Tramonte & Willms, 2010). More and more research studies are being conducted to investigate the relationship between anxiety and student achievement in various subjects and in test-taking. Real or perceived, anxiety was found to negatively impact both achievement and test-taking experiences.

With the Race to the Top initiative, introduced by Arne Duncan, U.S. Secretary of Education, in 2009, and No Child Left Behind, introduced by President Bush in 2001, high-stakes testing is not expected to decrease any time soon from public schools. Knowing that high-stakes testing will result in increased test anxiety among students, it is even more important that educational leaders become aware, informed, and open to exploring and implementing interventions to reduce test anxiety (Donato, 2010). It will be important for school counselors and teachers to teach students how to best respond to the physiological and psychological stress and anxiety if academic pressure, perceived or real, affects them.

Surveys were used to determine how students’ perceptions of a subject’s difficulty affect their levels of test anxiety on particular subjects in a study of 196 first-year college students (Everson, Tobias, Hartman, & Gourney, 1993). The students self-reported their test anxiety levels in social science, math, physical science, and English. It was hypothesized that students in general tend to be more anxious about tests in subjects they perceived more rigorous than in subjects such as humanities or the arts. Physical science was found to cause significantly greater anxiety than math or English in this
study. Their anxiety level increased when the students believed a subject was complex and difficult to master. The results confirmed the hypothesis that students’ perceptions of a subject’s difficulty had a positive correlation to their level of anxiety in that subject.

Math anxiety was reported as significant, particularly for girls in other studies (Campbell & Evans, 1997; Geist, 2010). Anxiety among females in a single-sex ninth grade algebra class was compared to anxiety among females in a co-ed algebra class in a study conducted by Campbell and Evans (1997). Using the Mathematics Anxiety Rating Scale for Adolescents (MARS-A), it was found that females in the single-sex algebra class had statistically lower level of math anxiety rating than the females in the co-ed algebra class $(t = -3.37, p < .005)$. These findings suggest that the presence of males in the class may have had an intimidating effect on the females contributing to increased levels of anxiety. Hyde, Fennema, and Lamon, (1990) added support to this gender difference. Their study concluded that in order to explain these higher anxiety levels in math scores and math-related occupations held by girls, other factors, such as internalized belief systems, could be to blame. Eccles and Jacobs (1986) further supported this gender difference when they found that parents’ stereotypical gender beliefs, as well as students’ perceived beliefs of the value of math, played major roles in explaining gender differences in mathematical achievement. Females are too often overlooked or socialized to dislike math, although their cognitive abilities in math were similar to their male classmates (Geist, 2010). Overall, epidemiological surveys have shown females to be about one and a half to two times more likely to have anxiety than males regardless of the course taken (Breton et al., 1999).
Math anxiety does not only target females. At-risk populations, such as those from low socioeconomic status, also have shown significant levels of math anxiety. Geist, in his 2010 review of the literature, found that children of low socioeconomic backgrounds often have parents who have an inadequate education and a negative attitude toward math themselves. The gap in achievement is not due to differing levels of potential and ability but more from developing math anxiety or negative attitudes toward math (Ashcraft, 2002).

**Anxiety and Age**

Anxiety does not have an age requirement. It has been estimated that 9% to 10% of preschool children have an anxiety disorder (Rockhill et al., 2010). Trauma and stress can trigger the onset of anxiety in children during the first year of life. Genes also play a role, particularly if there is depression or obsessive-compulsive disorder in the family history. The Zero to Three advocacy group (Kluger, 2011) estimated that 10% of children from birth to 3 years old have been found to struggle with anxiety. This nonprofit group published and revised the *Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood* (DC: 0-3R, 2005). The goal of this publication was to address the needs of children aged 0–3 years and to develop a systematic, developmentally appropriate classification of deviations from developmental norms of these young children (Rockhill et al., 2010). In this age group, the impairment may be in the child or family’s functioning and/or the child’s development. Observing anxiety in a baby takes a trained eye. Signs include crying, tantrums, or clinging at unnatural times. Often, signs of anxiety are exposed during play, when a once calm baby becomes easily startled or enthusiasm for play suddenly
decreases or vanishes all together. In Kluger’s (2011) article, “Small Child, Big Worries,” an eye-tracking system was used to detect anxiety. When anxious children were shown a picture of a snarling dog, they tended to focus on the parts of the picture that represented danger, such as the dog’s eyes or teeth. The Zero to Three advocacy group quotes statistics of 90% of preschoolers who are impaired with anxiety are still impaired when they reach school age.

There is a shift that occurs as children mature from concrete specific fears to more abstract and interdependent worries when anxiety is examined by age. Younger children have higher levels of separation anxiety and the older children report more social and generalized fears (McLoone et al., 2006).

Tramonte and Willms (2010) reported in their study of Canadian middle and high school students that adult mental health issues began before the mid-teens. Schools are the place children spend most of their daily hours and children and adolescents constantly face the challenges of, not only trying to fit in and find their identity, but trying to also meet the expectations of their families, teachers, and community (Tramont & Willms, 2010). Using Csikszentmihalyi’s Theory of Flow, Tramont and Willms showed that females had a higher prevalence of anxiety when compared to males in both middle and high school. They also found that students who were not confident in their skills were more likely to experience anxiety. Though this study was done in Canada with Canadian students, one may theorize these results are not cultural and would be found in American schools as well. Tramonte and Willms used background information and data from the school achievement and school belonging study in the Programme for International Student Assessment (PISA). PISA is an internationally standardized assessment
developed by over 65 countries and given to 15-year-olds in schools. PISA assesses students near the end of compulsory education to determine if they had acquired some of the knowledge and skills that were essential for their success in society (Organisation for Economic Cooperation and Development, 2009). Between acquiring the right skills, fitting in, and gaining confidence in a competitive environment, middle and high school students are bound to develop some degree of anxiety, whether from American schools or abroad.

**Anxiety and Cultural Differences**

Levels of anxiety, particularly test anxiety, are reported to vary across cultures for school-aged children (Bodas & Ollendick, 2005; Seipp & Schwarzer, 1996). Cultural norms and values and how they relate to school achievement may account for the cross-cultural differences in anxiety, particularly test anxiety (Zeidner, 1998). School achievement expectations, family values, varying features of different school systems, society expectations, and socialization practices all play a part in the anxiety levels of the students. Seipp and Schwarzer (1996) conducted a meta-analysis of data from 14 countries, including United States, China, Japan, and Korea. Korea had the highest level of test anxiety when compared to the 13 other countries. They found that authoritarian parents, intense school examination systems, and high stress schools were the reasons given. The Chinese and Japanese students reported the lowest anxiety levels even though Japan is a test-dominated, competitive society. The United States students scored in between the highest and lowest anxiety levels reported.

Lowe and Ang (2011) conducted a cross-cultural examination of test anxiety among United States and Singapore students. Singapore males experience strong family
pressure to excel in school because success in school is vital to not only their family’s success, but the economic success of their society thus causing high anxiety. Females in Singapore show low anxiety because their cultural norms do not allow for any expression of anxiety as it brings shame and losing of face to their families. Confucian values still have a strong influence in the Singapore society (Lowe & Ang, 2011). Personal goals are sacrificed for family goals, and obedience, diligence, and utmost respect for the family are expected from all children in Singapore. The United States is more of an individualistic society where self-determination and autonomy is encouraged. United States males tend to show less anxiety where United States females are more willing to express their anxiety which is accepted.

The risk of developing social phobia was found to be significant during the junior high years in Sweden. In a 2008 study of 2,128 adolescents between the ages of 11 and 14, there was a statistically significant difference in the prevalence of anxiety in girls compared to the boys, although there was not a significant difference between the grades or between ages in the study (Gren-Landell et al., 2008).

The fact that adolescents become more aware of others’ opinions and social evaluations may cause distress and anxiety in some students though the researchers reported that the causes were not completely understood. It becomes more important to fit in and become part of the group during the teenage years. Social phobia is often associated with long-term negative consequences such as decreased quality of life, poor health, and socio-economic hardships (Stein & Kean, 2000).
**Anxiety and Ethnic Groups**

School can be very stressful for many children, especially children that grow up in American schools speaking different languages or living different experiences outside of the school doors. Three ethnic groups were studied in a 2009 investigation on psychological distress in racial and ethnic minority students: Hispanic students, African-American students, and Native North American students (Elder et al., 2009). The Hispanic students were found to have high levels of anxiety, lower self-efficacy, and more negative behaviors due to difficulties in language and other socio-cultural factors, which impacted their academic performance (Alva & Reyes, 1999). African-American students showed an increase in the risk of depression, disassociation, post-trauma stress, anger, and anxiety leading to increasing academic and behavioral problems, due to exposure to violence and single-parent families (Hall, Cassidy, & Stevenson, 2008). The differences in the cultural styles of the American Indians students caused feelings of frustration, anxiety, alienation, and inferiority (Williams & Berry, 1991).

**Anxiety, ADHD, and the Gifted**

Anxiety is a mental health issue that manifests itself to many other issues school age students deal with on a daily basis. It has been well-documented that students diagnosed with Attention Deficit Hyperactive Disorder (ADHD) often suffer from various degrees of anxiety as well. In Schatz and Rostain’s (2006) review of the current literature, they found the prevalence of anxiety disorders comorbid with ADHD to be as high as 50%. Bagwell, Molina, Kashdan, Pelham, and Hoza’s (2006) study of 142 adolescents with a history of ADHD hypothesized these adolescents would have higher levels of anxiety and mood disorders, partly due to associated academic, social, and other
impairments of ADHD in adolescents. Though it was supported by a 1996 study of children with ADHD and the association of lifetime diagnoses of major depression and multiple anxiety disorders (Biederman et al., 1996), the results did not show a strong correlation of this hypothesis. There was evidence of a significant increase in persistent anxiety in the students who had more externalizing behaviors or social problems. Children with ADHD often suffer from pervasive social skill difficulties and have trouble retaining long-term friendships (Bagwell, Molina, Pelham, & Hoza, 2001). Anxiety experienced by students with ADHD may have more to do with inabilities to function in daily life because of social and cognitive deficiencies.

An important piece of literature reviewed by Schatz and Rostain (2006) was on the Cognitive Processing Model. This model depicts how perception and information processing may be slowed accounting for many of the difficulties experienced by students with ADHD. This deficit in information processing, especially during the school years, might lead to failure in fitting in with the social and academic norms, resulting in increased anxiety. Having ADHD is a challenge for an adolescent who is trying to find his place in school. Adding anxiety to the mix makes it difficult for these students to maneuver through these important learning years without assistance and support.

A study by Mikami, Ransone, and Calhoun (2011) compared the influence of anxiety on the social functioning of children with and without ADHD. They used multiple informants to collect data on 62 children with ADHD and 62 age- and sex-matched comparison children. The data collected came from parent reports, teacher reports, peer reports, and objective observations in a lab-based playgroup. The descriptive statistics found that, compared to the comparison children, children with
ADHD had more anxiety symptoms, poorer social skills, and more social problems. The second hypothesis stated that anxiety would not only predict less aggression but also less prosocial behavior observed at playgroup. Anxiety symptoms were consistently associated with poorer social skills but this was found statistically significant in students without ADHD more than for students with ADHD. Overall, the results from this study show the effects from anxiety on social functioning may actually be stronger for children without ADHD than for children with ADHD. This is not to suggest children with ADHD and anxiety do not have significant problems with social functioning. This research highlights the importance of educators and therapists to be aware and involved in helping all students who suffer from anxiety develop healthy social functioning.

Another important area that needs the awareness and attention of adults is the area of the gifted student who is diagnosed with ADHD. Gifted students with ADHD often have a more severe case of ADHD than non-gifted children (Sullivan, 2011). Symptoms of ADHD begin to manifest themselves in gifted students when they reach their middle school years. It is during these years when students change teachers and classes throughout the day, have multiple teaching styles and classroom variations, and there is an increased need for effective organizational skills. These factors, along with a new environment and the beginning of puberty, can cause gifted students with ADHD to develop self-esteem issues, lower grades, and an increase in anxiety.

Gifted students who are not diagnosed with ADHD do not always struggle from anxiety anymore than students who are not considered gifted. What causes anxiety in gifted students is their drive for perfectionism, intensity, and the capacity to understand adult issues well before their maturity supports it. They often lack the skills necessary to
manage the extra stress. Gifted children have the unique challenge of always learning, analyzing, questioning, and computing their environment, causing stress and anxiety (Haberman, 2010). Younger children who have been identified as gifted often do not know how to handle these anxious feelings and their response often manifests itself into inappropriate acting out, such as becoming louder, abnormally active, acting out by yelling or becoming belligerent (Haberman, 2010; Sullivan, 2011).

In a review of literature on mental health of gifted youth over the past 25 years, gifted youth exhibited significantly lower levels of anxiety in comparison to students who are not gifted (Martin, Burns, & Schonlau, 2010). This is in direct contrast to the previous work of Haberman (2010) and Sullivan (2011). It is important to note that only nine studies were reviewed in this research that fit the specific criteria of comparing the mental disorders among gifted and nongifted students. The majority of the other studies did not use nongifted as a control group and in all nine of the studies, the gifted students were, not only identified, but also receiving special services, such as participating in a gifted classroom. It could be hypothesized that health problems, such as anxiety, would be more prevalent in gifted students who have not been identified or who are being educated with their peers in the general education classroom.

Another study that also investigated at gifted students who were previously identified and being educated in a setting ideal for their learning was the study by Christopher and Shewmaker (2010). In this study, the authors explored the relationship between the perfectionism of gifted and high performing students in the areas of depression and anxiety. Though there were positive correlations between the perfectionism of gifted and high performing students in the area of depression, a positive
relationship between anxiety and the perfectionism could not be confirmed. Again, it should be noted that all participants were identified as gifted and were being served through their school’s program for the gifted and talented. The results may have been different in terms of levels of anxiety for gifted students not identified or being served with their peers in the typical public school.

**Parental Influence on Children With Anxiety**

Though the influence of parents on children with anxiety is not within the scope of this research, it would be remiss not to take the time to include basic information about the unique roles the mother and father play in the raising of children with anxiety. It was found through extensive research that parents of children with anxiety approach childbearing practices differently than parents of non-anxious children (Lindhout et al., 2006). Barrett, Fox, and Farrell (2005) also found that parents of anxious children showed less paternal warmth, less maternal reward of coping behaviors, and more control overall as compared to parents of non-anxious students. Fathers in particular showed more control over their anxious child than toward the siblings. McLeod, Wood, and Weisz (2007) support these finding noting that both parental control and parental rejection are associated with symptoms in children and adolescents. The results of their study showed that parental controlling behaviors played the most important role in child anxiety. Wheatcroft and Creswell’s (2007) study of preschool students found the parents often felt less in control of their child’s avoidance behaviors and mood. This low locus of control was often associated with hostile or overcontrolling behaviors from the parents. Mothers were found to be more controlling of their elementary aged children,
whereas fathers tended to show too much control during their adolescence (Verhoeven, Bogels, & van der Bruggen, 2011).

The beliefs and expectations of parents with anxious children also stood apart from parents of non-anxious children. These parents expect their children to avoid tasks and social events, be more anxious than their peers, and less able to cope with everyday situations (Wheatcroft & Creswell, 2007). These beliefs and expectations about the child’s anxiety have been widely studied (Barrett et al., 2005; Francis & Chorpita, 2009; Francis & Chorpita, 2010; Wheatcroft & Creswell, 2007). Francis and Chorpita (2010) reported that parental thoughts and beliefs about their child’s anxiety were significantly associated with their child’s negative experiences of anxiety. Their beliefs about the harmfulness of their child’s anxiety significantly affected the relationship between parent and child.

This relationship can be further complicated when the anxiety disorder runs in the family. Multiple research studies have looked at the experiences of families when one or both parents have anxiety, as well as the child (Lieb et al., 2000; Stein et al., 1998; Tillfors, Furmark, Ekselius, & Fredrikson, 2001). Francis and Chorpita’s 2009 study found that parents’ reports of their own experience of anxiety contributed to a negative attitude about their child’s anxiety.

Extreme anxiety also plays a role in school phobia (Tyrrell, 2005) or school refusal. More than 60% of students who refuse to go to school are diagnosed with a primary anxiety disorder (Brand & O’Conner, 2004). Early research believed the cause of school refusal was related to a strong mother–child relationship resulting in reluctance by the child to leave home (Elliott, 1999). Current researchers have found strong
evidence that parents of these children often exhibit anxiety disorders themselves (McShane, Walter, & Rey, 2001).

**Summary and Discussion on the Section on Anxiety**

This section of the literature review discussed the definition and history of anxiety as well as how anxiety manifests itself in people of all ages, ethnic backgrounds, or cultural groups. People with ADHD and those identified as gifted can suffer from anxiety. Anxiety is being seen more and more behind school doors, whether it is test anxiety, math anxiety, or just generalized anxiety. Challenges in our economy, competition for school and college placements and good jobs, difficult home situations, and the fear of failing are additional factors that increase anxiety every day. Anxiety does not discriminate and can have lifelong effects regardless of age, gender, socio-economic status, or ethnic group. People are being diagnosed with anxiety and just as many are going undiagnosed, misdiagnosed, or dismissed as a phase to outgrow (Masia-Warner et al., 2005). There has been a wealth of research on anxiety and the majority of the research has used the quantitative approach. Many of the studies have been conducted on children, rather than with children, to gain information to send out to others rather than to empower the children with information for their use. This study works with children by providing anxiety-reducing strategies for them to gain control of their anxiety and hear from them how they feel about this experience. It takes the responsibility out of the clinical setting and into the public school setting where it can be practiced on a weekly basis in a setting that is familiar and safe.
Treatment in Clinical and Alternative Settings

Researching and providing effective treatment has to be a valued priority with approximately 40 million adults, age 18 and older, suffering from cases of excessive or overbearing levels of anxiety (Anxiety Disorders Association of America, 2010; Rachman, 2004), and between 8 and 27% of children and adolescents meeting the diagnostic criteria for an anxiety disorder sometime during their youth (Albano et al., 2003). Anxiety disorders can become chronic and have lifetime prevalence unless properly treated. Clinical treatments that have been found to be scientifically proven and effective for children with anxiety disorders are cognitive-behavioral therapy, emotion-focused cognitive-behavioral therapy, and medication. Family treatment also has proven to be beneficial to increase the outcome of treatment for the children. A variety of alternative schools have also addressed the need for specialized treatment for school-aged children. Though there is mixed reaction as to the total benefit of clinical and alternative school treatments, they are of interest to this study.

Cognitive-Behavioral Therapy

Cognitive-behavioral therapy (CBT) is a talk therapy that has been proven to be effective in treating anxiety disorders (Anxiety Disorders Association of America, 2010). This therapy addresses the physiological, cognitive, and behavioral aspects of anxiety. The patients learn to identify negative thoughts and then replace those thoughts with positive ones. Patients also learn to distinguish between realistic thoughts and unrealistic thoughts. Usually homework is given so the patients learn to recognize these thoughts and practice their self-talk without a doctor or therapist present. Behavioral training strategies, such as modeling, role-play, problem-solving, and contingent reinforcement,
are utilized (Suveg, Kendall, Comer, & Robin, 2006). Though this therapy is short-term with sessions that last about 12 weeks, it can have long-term benefits. One of the first studies to explore the efficacy of CBT in children was conducted by Kendall (1994). Kendall found CBT to be successful in his randomized clinical trial of 9- to 13-year olds who had a diagnosis of overanxious disorder, avoidant disorder, or separation anxiety disorder. Using a pretest, treatment, and posttest design, 64% of the treated children in the study no longer met the criteria for their anxiety disorder. At the one-year follow-up, the treatment gains remained the same.

**Emotion-Focused Cognitive-Behavioral Therapy**

One important component missing from cognitive-behavioral therapy was the need to address the emotion-related deficits that often accompany youth with anxiety. Suveg, Kendall, Comer, and Robin (2006) investigated an intervention for anxious youths that maintained the efficacy of CBT but also addressed the emotion-related deficits in the hopes of improving the overall psychosocial functioning. In their multiple-baseline design, six youths, identified as having a primary diagnosis of generalized anxiety disorder (GAD), separation anxiety disorder (SAD), or a social phobia (SoP), received an average of 16 individual sessions of Emotion-Focused Cognitive Behavioral Therapy (ECBT). Like the CBT treatment, the ECBT utilized modeling, role playing, cognitive restructuring, contingent reinforcement, and homework.

Unlike the CBT which include one session of emotion understanding, the ECBT incorporated emotion-related concepts into every session to develop both emotion understanding and emotion regulation skills. An example would be the therapist would choose an emotion that he is currently feeling and explain how he knows he is feeling this
way and why. Then the therapist encourages the child to do the same. This exercise can help the child understand emotional experiences, normalize those emotions, and learn to talk about those emotions. It can be an empowering lesson for the child. Reviewing past research, Suveg et al. (2006) found that with CBT alone, about one third of the children with anxiety ended treatment with unwanted anxiety levels, whereas with the children who participated in their ECBT experiment, the severity ratings of their primary anxiety diagnosis had improved for 100% of all of the participants. At posttreatment, four of the six children did not meet the criteria for the pretreatment diagnosis. The children were better able to identify and talk about their emotional states and now had the tools to manage their emotional experiences. Both studies showed success for the patients receiving treatment in these clinical settings. Both studies used Ph.D.-level therapists or advanced doctoral students in clinical psychology. Both CBT and ECBT take extensive training to be effective for treating anxiety. Neither CBT nor ECBT would be appropriate or feasible to provide in a school setting. Often CBT and ECBT are used in conjunction with prescribed medication.

**Medication**

Prescription medicine is often prescribed to treat children with anxiety. In fact, medication alone is the most common treatment method for panic and anxiety disorders within the primary-care setting (Roy-Bryne et al., 2002). Currently, the medication prescribed is selective serotonin reuptake inhibitors (SSRIs) for the treatment of childhood and adult anxiety disorders (Anxiety Disorders Association of American, 2010). SSRIs include Prozac, Zoloft, Luvux, Celexa, Paxil, and Lexapro. Less common prescribed medications are tricyclic antidepressants and benzodiazepines. As in many
antidepressant medications, there are side effects. SSRIs have been known to cause headaches, nausea, and stomachaches, as well as difficulty sleeping. Recently, following concerns that the SSRIs may cause suicidal thoughts and behaviors, the FDA conducted a comprehensive review of multiple published and unpublished controlled clinical trials of antidepressants currently being used by children and adolescents. This review resulted in a warning by the FDA on October of 2004 about this increased risk. They did not, however, remove the medications from use (U.S. FDA, 2007).

**CBT and Medication**

Often cognitive-behavioral therapy (CBT) and emotion-focused cognitive behavioral therapy (ECBT) are used in conjunction with prescribed medication. In a study by Craske et al. in 2005, participants between the ages of 18 and 70, who met the *DSM-IV* criteria for panic disorders, received a combined treatment of anti-anxiety medication and cognitive behavioral therapy. A control group was formed that used medication only to treat their anxiety disorder. The participants who received CBT in addition to anti-anxiety medication achieved significantly improved outcomes at a 3-month follow-up as hypothesized. Twelve months later, the results were sustained. In another study by Roy-Bryne et al. (2005), participants were offered a six CBT sessions with a behavioral health specialist and were offered recommendations for appropriate anti-panic medication. This study was conducted over 3 months. At the end of 3 months, these patients achieved slower symptom severity and higher functioning overall. At the 12-month follow-up, these results were sustained. What is important to note is that these treatments were done at a clinic and the patients were treated by highly trained doctors and therapists.
Family Clinical Treatment

Anxious children often come from homes of anxious adults. A 2006 study of family history found that two thirds of the mothers of anxious children had a current diagnosis of an anxiety disorder themselves (Cooper, Fearn, Willetts, Seabrook, & Parkinson, 2006). Creswell and Cartwright-Hatton (2007) found that when a parent is anxious and his or her anxiety is not addressed, the outcome of treatment is less successful for the child. By adding a family component to the already successful CBT treatment, the Family-based Cognitive Behavioral Therapy (FCBT) increased the chances of optimal treatment outcomes for the child. Heyne et al. (2002) studied the effects of FCBT on children with anxiety-based school refusal. They concluded that when the parents were involved in this treatment, school attendance and adjustment to the school setting were significantly improve in their children, even if the children themselves did not receive direct treatment (Heyne et al., 2002). The authors were unable to clearly state which age group, younger children or older children, FCBT influenced most. They hypothesized that FCBT had a larger impact on the younger children as they were still under a greater influence of their parents than older children and adolescents.

An older study conducted by Bernstein and Garfunkel (1988) studied the pedigree of families of students with school phobia. They analyzed blind and independent family histories, as well as conducted multiple structured interviews with parents and siblings of children with chronic, severe school phobia who met the DSM-III criteria for both depressive and anxiety disorders. They found that in four of the six families in the study, both maternal and paternal family members, as well as three generations of relatives, presented with anxiety and depression. Ten siblings of children with school phobia were
also evaluated in this study. One of the siblings had both anxiety and depressive disorders and four had anxiety disorders only. When given a family assessment measure, the parents of children with school phobia reported more family disturbances in their family interactions. The mothers in particular were described as overprotective, controlling, and ambivalent, making it more difficult for their children to gain independence and confidence.

Parental attitudes and beliefs have a huge influence on the success of the treatment of their child’s anxiety. In a 2009 study that explored the relevance of expressed emotion to the treatment of social anxiety disorder, the researchers chose 16 adolescents, who were participating in a school-based cognitive behavioral intervention to reduce social anxiety.

Expresses emotion (EE) was defined in this study as parental overinvolvement, criticism, and hostility. Using individual assessments, the parents were classified as either having high expressed emotion or low expressed emotion. The results of this research study showed that only adolescents of parents with low EE, benefited from the school-based CBT treatment. High degrees of perceived criticism and hostility by parents toward their anxious children positively correlated to poorer treatment outcomes (Garcia-Lopez, Muela, Espinosa-Fernandez, & Diaz-Castela, 2009).

**Alternative Schools for Treatment**

Another option for working with children with anxiety and other at-risk behaviors is to teach and treat these students at an alternative school setting. The U. S. Department of Education (2002) defines alternative schools as a public elementary/secondary school that addresses needs of students that typically cannot be met in a resident school,
provides nontraditional education, serves as an adjunct to a resident school or falls outside the categories of regular, special education, or vocational education. For example, the Exploration Alternative High School is a school in Northern Carolina that serves 15 to 20 at-risk high school students who were referred by the courts or the administration at the local high school. This school defines at-risk as students who struggled with issues such as academic or behavioral difficulties, abandonment, neglect, drug abuse, school refusal and absenteeism, and high anxiety. What Exploration Alternative High School offered that the typical high school did not offer was a program with high expectations, low tolerance, and a highly individualized environment. Counselors are readily available to talk one-on-one about emotional, economic, academic, social, or family issues. The school recognizes that poor social skills are often a barrier to their academic and independent success so there is an emphasis on social skills development and self-advocacy. The students have a part in how they learn and are considered an important part of the system. Students plan all field trips and spend time talking about how their individual struggles need to be considered and planned for to ensure a successful experience for all students. Students do not feel alone in their struggles as everyone has something they are dealing with.

In 1998, a case study was concluded at the Exploration Alternative High School with the purpose of exploring the match between at-risk issues and the services provided by alternative learning programs (Rayle, 1998). Observation, interviews with staff, students, parents, court officials, and staff from their previous schools, and a comprehensive review of the school policies were used to collect data for this case study. A review of their curriculum, the North Carolina Standard Course of Study, was also
completed. This curriculum allowed for individual pacing with an emphasis on hands-on learning experiences. The results of this case study were mixed. Not every student was successful in this environment. It was difficult to target treatment for just anxiety or abandonment with such a broad range of issues in one building. Students left the program because it did not meet their needs or was too different compared to what they were used to in a school environment. The students who were most successful were those who had trouble dealing with the conventional school system, but still had aspirations of going to college.

Furthermore, Franklin, Streeter, Kim, and Tripoli (2007) investigated at the effectiveness of a solution-focused alternative high school (SFAS) in preventing at-risk students from dropping out of school. Using a solution-focused brief therapy framework, the eight focused characteristics emphasized were:

- faculty emphasis on building students’ strengths, not emphasizing weaknesses;
- emphasis on student choices and personal relationships;
- overall commitment to achievement and hard work;
- attention to individual relationships and progress of each student;
- focus on students’ future success instead of past failures;
- trust in students’ evaluations;
- celebrations of small steps toward success; and
- reliance on individual goal-setting activities.

Unlike the Exploration Alternative High School, 374 students attended this SFAS. The role of the teacher was important to note. The teachers at the SFAS do not only
focus on instruction and academics but are facilitators and motivate students to become active learners who were taught to become responsible for their own learning and education. Students were provided tools to overcome individual struggles as they set goals and take control of their outcomes. The curriculum is self-paced and there is no penalty for completing class work late. The traditional semester timelines are not used as students are encouraged to spend more time on subjects in which they either struggle with or have a strong interest. Franklin et al. (2007) examined differences in three variables: (a) credits earned; (b) attendance; and (c) graduation rates using a quasi-experimental pretest-posttest comparison group design. The results showed a significant improvement in credits earned with the SFAS group. Attendance for the first year was increased but had dropped by the second year. Interestingly, the correlation between attendance and credits earned was low for all semesters except the first spring, ranging from .095 to .259.

Graduation rate was low when using a four-year criteria. The researchers believed this was due to the self-paced curriculum and the fact that many of the students either worked full-time, had children, or spent extra time working on personal issues and challenges. In the sample of 437 SFAS students, 23 graduated within the four years and seven graduated the fifth year giving the SFAS program an 80% success rate. Twelve students went on to some form of postsecondary schooling of the 23 who graduated within four years. This study shows that a focused intervention can be very successful. The eight characteristics of the SFAS could be beneficial embedded in the public schools so that more students can be helped within their familiar setting of their public school.

Wilkins (2008) studied school characteristics that influenced student attendance and academic success. The study followed four students who refused to attend their
regular schools, but willingly attended Brookfield Park, an alternative K-12 school for students at-risk and with special needs. These four students attended a school avoidance program (SAP) offered this school. Four themes emerged from the interviews that explained the students’ motivation to stay in school and work toward graduation, despite their individual challenges. One of the themes was the positive school climate. Students felt valued, comfortable, wanted, accepted, and secure. The second theme was academic environment where the deadlines were more lenient and the students felt the teachers showed more interest in their academic progress. The third theme was discipline. Students in the school avoidance program at Brookfield Park felt the discipline was not based on petty rules and blanket punishments but were more fair and non-punitive. The students felt the principal was more willing to listen to their reasons and react according to his assessment of their reasonableness. The final theme was relationships with teachers. The students in the study felt the teachers were people they could talk to outside of the academic setting. They felt genuinely cared for and that they could talk about anything with their teachers, even if it had nothing to do with school. A common comment in the interviews was that teachers at Brookfield Park did not yell. The collaborative atmosphere at Brookfield Park sends the message that all students’ contributions were valuable to learning and developing a sense of community.

This study examined whether providing focused-treatment and supports as described above within the public school setting can also be successful in empowering students with anxiety to reach their goals and improve the quality of their experiences.
Summary and Discussion on Treatment in Clinical and Alternative Settings

The research presented above has shown success for many anxious children and adolescents who received treatment in a clinical or alternative school setting. Research also shows that only one third of those needing treatment receive it. More knowledge is needed in how to reach the other two thirds of people who have some form of an anxiety disorder. Given that approximately 40 million adults, age 18 and older, suffering from cases of excessive or overbearing anxiety levels (Anxiety Disorders Association of America, 2010; Rachman, 2004) and between 8% and 27% of children and adolescents meeting the diagnostic criteria for an anxiety disorder sometime during their youth (Albano et al., 2003), untreated children with anxiety disorders are at a higher risk to have lower academic achievement in school, avoid or miss out on important social experiences in their lives, become users of illegal substance, and develop other mental health problems decreasing the quality of their lives (Anxiety Disorders Association of America, 2010). It is often the adults who make decisions of treatment for their children based on their age and developmental level. Often, the children remain undiagnosed, misdiagnosed, or dismissed as a phase of growing up. Exploring the idea of embedding anxiety-reducing strategies into the school setting is worthy in an attempt to give these children a voice and broaden treatment into a location that would meet the needs of many. This research explores the experiences of children as they participate in anxiety-reducing strategies embedded in the classroom curriculum, hopefully empowering them to take control of their anxiety in an environment that is familiar, does not have an added cost, other than time, and has less of a stigma built in.
Treatment in the School Setting

Clinic-based programs are readily available, yet anxious children and adolescents are rarely referred (Kashdan & Herbert, 2001) and are unlikely to receive any kind of treatment. Knowing that anxiety can become a disabling disorder when it becomes an excessive, irrational reluctance to everyday situations (Francesco et al., 2009), early intervention is vital. By embedding effective treatment and anxiety-reducing strategies right into the classroom, educators may begin to circumvent this problem. Educational leaders have an opportunity to help implement and support preventive interventions to not only enhance school climate, but to minimize the effects of developing a severe anxiety disorder (Allen & Klein, 1996).

In 1999, the U.S. Surgeon General’s report designated schools as a viable setting for identifying and addressing mental health concerns in children and adolescents (U. S. Department of Health and Human Services, 1999). This was based on several observations. First, schools have access to children from 5 to 18 years of age. Second, receiving treatment and strategies within the school day reduces cost and transportation that a clinical setting would require. Third, children spend a majority of their waking hours in school, providing an increased opportunity to identify and provide early interventions and embedded strategies. Finally, children and families are often reluctant to seek out treatment partly due to the stigma that comes with a mental illness. Many of the barriers of outside treatment can be avoided or reduced when provided during the school day. Barriers such as difficulties with transportation to the clinic, demographic barriers evoked by the cost of the services, lengthy waiting lists, and perceived stigma and shame some children may feel for having to seek outside treatment can all be
removed by embedding these services in the school day (McLoone et al., 2006). It is crucial to implement proactive strategies in the context where socially anxious adolescents spend most of their time given that socially anxious adolescents are reluctant to ask for help due to their social fears (Garcia-Lopez et al., 2009). More students can be identified and served by offering these services within the school day where many students receive various interventions and differentiated instruction is a common practice.

**Educational Leadership’s Role**

Educational leaders have a great opportunity to help implement and support preventive interventions that not only enhance school climate, but minimize the effects of developing a severe anxiety disorder (Allen & Klein, 1996). An important predictor of a program’s success is the principal’s attitude toward it (Goor, Schwenn, & Boyer, 1997). Effective, transformational leadership plays an important role in the success of a classroom embedded program such as anxiety-reducing techniques practiced during the school day. Burns (1978) defines transformational leadership as a mutual belief, value system, and commitment to fully engage every stakeholder to continually reach for what is best for the school and the students. It is leadership built on relationships and a true desire to seek to satisfy the higher needs of every person and empower everyone to continually improve and grow. By incorporating a culture that promotes the values of success, trying hard, never giving up until the job is done, and, mostly, believing in oneself, the leadership can pave the way to successful implementation and follow-through of a new program (Reavis, Vinson, & Fox, 1999), especially a program that many would not expect as part of the class curriculum. Teachers report their need for their leaders to lead by example and take a strong and consistent interest in what is
happening in the classroom, especially if it is a new initiative. Teachers need their leader to dialogue and engage with them and their students about the learning and teaching in their classroom, creating an atmosphere of positive opportunities and high expectations of success.

Leadership plays a strong role in promoting the vitality and new growth of schools (Southworth & Du Quesnay, 2005). Senge (1990) offers a contemporary view of high quality leadership. He believed a leader’s focus must be on empowerment, transformation, collective learning, and community involvement and support to be an effective change agent in schools. A leader can no longer hold an individualistic and non-systemic perspective but must believe in leadership that is distributed and celebrated among all stakeholders.

Research has shown that the school leader is in an excellent position to influence the transfer of locus of control. There becomes a shared sense of ownership by the leader and students by empowering the students (Treslan, 2010). Student outcomes are more likely to improve when teachers are empowered in areas in which they believe (Jacobson, 2010). As an educational leader, there is a responsibility to “promote the success of all students by advocating, nurturing, and sustaining a school culture and instructional programs that are conducive to student learning and staff professional growth” (Council of Chief State School Officers, 1996, p. 14). Dove and Freely (2011) conducted an investigation on the effects of leadership on innovative program implementation. Their results showed that leadership style was one of the key factors for success of an innovative program. Focusing on the implementation of the Dunn and Dunn Learning Style Model in a New York middle school, the case study investigated the perceptions of
the stakeholders on the models’ initiation, adoption, employment, and outcomes. Dove and Freely (2011) discovered two leadership styles that were the most effective in implementing new programming through interviews with administrators, parents, students, and teachers, as well as classroom observations, videotapes, teacher surveys, checklists, and achievement-test-score evidence. The first style was democratic, supported by the way the administrator introduced the new initiative, asking participants what they thought and gaining consensus through participation. The second leadership style was coaching. The leader of the building spent the necessary time developing the staff for future success. His confirmation and permission to “just try it” brought the staff along at a comfortable pace, allowing his staff to find their own meaning for the model. By introducing, refining, and constantly supporting this innovation over a three year period, the principal was able to show that change is not an event but a continuous process.

Leadership style can enhance or diminish the chances for success of any new initiative. Dove and Freely (2011) provided evidence of factors that lead to successful change and program implementation. Those factors are collaboration, promotion and support of teacher leadership, administrative stability, commitment to diverse, ongoing professional development, frequent opportunities for teacher decision-making, and a leader who is comfortable in his role as a democratic coach.

Anxiety-Reducing Techniques

Some people are able to develop their own survival techniques for dealing with their anxiety depending on the age and maturity of the person with anxiety. Kondo and Ying-Ling (1994) gave 74 undergraduates the Interaction Anxiousness Scale (IAS)
developed by Leary in 1983. This scale was a measure of the affective component of social anxiety. After completing this scale, the participants were asked to share specific strategies they used to cope with their anxiety. Once completed, there was a list of 81 tactics that were then categorized into five categories or main strategies. These strategies were (a) disaffiliation, (b) resignation, (c) relaxation, (d) positive thinking, and (e) passivity. Disaffiliation involved strategies used to reduce the amount of social contact a person has with other people. These may include little eye contact, little to no participation in conversations, to leaving social events early or avoiding them all together. The second strategy was resignation where the anxious person is unwilling to do anything about their anxiety. The third strategy was relaxation, either through relaxation techniques or relying on recreational activities. The fourth strategy was positive thinking. Anxious people were taught to create positive thoughts about an anxious situation or event in order to push down the negative anxious thoughts before they take over. The final strategy was passivity where the person struggling with anxiety takes an agreeable role, agreeing to and smiling at everything that is being said or done. This allowed them to show a positive image while keeping their own thoughts and feelings to themselves. The results of this mixed method approach showed that relaxation and disaffiliation were the two most commonly used strategies for reducing or avoiding anxiety. The participants in this study were not advised or trained to use any of these techniques and had developed them themselves in an effort to control their anxiety. School-aged children and adolescents may find it difficult to turn to these survival modes as they so often rely on the adults in their lives to provide comfort and assistance.
Classroom-Based Interventions

Teachers and educational leaders play an important role in addressing and reducing the anxiety of the children in their schools. Students often perceive specific teaching styles and interpersonal styles of their teachers that have an impact in reducing anxiety in the classroom (Wilson, 1999). Wilson presented identified 16 strategies that the teacher could do in class to reduce anxiety and presented those findings at the annual meeting of the Mid-South Educational Research Association. Listed from most effective to least effective, the 16 strategies are:

- open book/open note test;
- working with a partner in the computer lab;
- instructor’s positive attitude;
- instructor’s encouragement;
- instructor’s reassurance that We Can Do It!;
- instructor’s recognition of anxiety of students;
- instructor’s use of humor in the classroom;
- guidelines (rubrics) provided for grades;
- working with a partner on in-class assignments;
- support of peers during class;
- working with a group on a research project;
- working with a group on in-class assignments;
- doing a research project that is about a real world situation;
- doing a research project designed to give information about one’s own;
- teaching situation;
• support of peers outside of class; and

• easy to get an A. (Wilson, 1999)

These strategies were strategies that could be embedded in every classroom, particularly once the educational leaders and teaching staff were aware of their impact in reducing anxiety. There was no cost or specific training involved, just a willingness to consistently put these strategies into the everyday learning experience. The long-term benefits last only as long as the student is in school.

There are other interventions and strategies that give the tools to the students and provide specific treatment designed to treat social anxiety. Several studies have been conducted to examine the efficacy of an in-school intervention called the Skills for Academic and Social Success (SASS) (Masia-Warner et al., 2005; Masia, Klein, Storch, & Corda, 2001). SASS was developed with an aim at modifying a clinic-based treatment to be more practical for delivery in a school setting. In the Masia-Warner et al. (2005) study, 42 of 1,521 9th through 11th grade students in two parochial high schools participated in this study. Five of the participants were diagnosed with a specific subtype of social phobia, while the other 37 adolescents had a diagnosis of social anxiety disorder. Only four of these students had ever received mental health treatment for anxiety. These sessions lasted approximately 42 minutes (one class period), once a week for 12 sessions. Parents and teachers also participated in two training sessions lasting 30 to 45 minutes each. In addition, there were four weekend social events with prosocial peers. The results indicated that the SASS intervention was superior to the wait-list in reducing anxiety and 66% of students in the SASS group no longer met the diagnostic criteria for social anxiety at the posttest, compared to 6% of the wait-list group. The
intervention had a cost and took time for training and implementing in an already full school day. It would be vital for the school leadership to buy into this intervention and support it throughout the process. Only a small percentage of students were involved in the intervention.

There were many other research-based interventions that can be implemented in schools—Ready-Set-R.E.L.A.X. (Allen & Klein, 1996; Tomb & Hunter, 2004), breathing strategies (Orth, 2011), setting up responsive classrooms (Oldfather, 1993), and promoting well-being in anxious children and adolescents (Ruini et al., 2009). Transcendental meditation (Elder et al., 2009; Nobori, 2012) had also been found to be successful in the classroom, although there is strong opinion that meditation was more about achieving personal growth, whereas relaxation techniques were designed to treat various disorders (Kokoszka, 1990). All of the interventions, with the exception of Ready-Set-R.E.L.A.X., required extensive training and were facilitated by a behavioral trained clinical psychologist. The required time for each classroom embedded session ranged from 45 minutes to 2 hours a week. Time was found by either rearranging the schedule and taking time from noncore times (Elder et al., 2009; Nobori, 2012) or taking time from core classes (Lantieri, 2008; Ruini et al., 2009; Tomba et al., 2010).

**Relaxation**

Relaxation training has been around since 1908 when Edmund Jacobson, of Harvard University, began investigating the benefits of tensing and releasing various muscle groups for people with anxiety (Conrad & Roth, 2006). Jacobson believed a person could not be simultaneously relaxed and tense at the same time. He believed that mental relaxation was the natural benefit of physical relaxation (Margolis & Pica, 1990).
His initial relaxation training consisted of 56 days of 1-hour sessions and involved 15 different muscle groups. Subsequently, in 1948, Wolpe began investigating the benefits of relaxation as a way to countercondition the fear response, thus reducing the symptoms of stress (Heroit & Pritchard, 2004). He studied Jacobson’s work on progressive muscle relaxation while trying to find incompatible responses that could easily be administered. Wolpe added hypnotic techniques and decreased the sessions to six 20-minute sessions with two 15-minute sessions to be done independently at home. He also added an additional component to his treatment by introducing real and imagined exposure to anxiety producing situations and events. Jacobson and Wolpe laid the foundation for effective relaxation techniques as an intervention for reducing anxiety. There has been a large body of research since 1948 bringing the techniques and strategies into clinical and school settings (Chang-Liang & Denney, 1976; Francesco et al., 2009; Franek, 2006; Frederick, 1975; Kokoszka, 1990; Lantieri, 2008; Larson et al., 2010; Lohaus & Klein-Hessling, 2003; Lohaus, Klein-Hessling, Vo gle, & Kuhn-Hennighausen, 2001; Manzoni, Pagnini, Castelnuovo, & Molinari, 2008; Or th, 2011; Rasid & Parish, 1998; Zalaquett & McGraw, 2000).

Relaxation Techniques

Three types of self-induced relaxation techniques that have been the most researched and proven effective in their use of reducing anxiety in children and adolescents are progressive muscle relaxation (PMR), deep breathing exercises, and positive self-talk (Francesco et al., 2009; Lohaus & Klein-Hessling, 2003; Manzoni et al., 2008; Margolis, 1990; Page, 1999; Zalaquett & McGraw, 2000).
Progressive muscle relaxation. Progressive muscle relaxation (PMR) is one of the oldest forms of relaxation training (Conrad & Roth, 2006). It decreases physiological aspects of anxiety while at the same time, distracting the client from thinking about their anxious feelings (Nassau, 2007). This process involves a sequential tensing and releasing of different muscle groups. The client moves through the major muscle groups, starting at the head and neck muscles and moving down the legs to the ankles (Larson et al., 2010). Children have the ability to learn progressive relaxation techniques in a short amount of time (Lohaus & Klein-Hessling, 2003). Manzoni, Pagnini, Castelnuovo, and Molinari (2008) conducted a meta-analysis of 27 studies from 1997-2007 to gain a deeper knowledge of relaxation training programs that were used specifically to treat anxiety disorders and to reduce anxiety in general. They chose articles that examined anxiety levels before and after relaxation treatment both in clinical and non-clinical populations. The specific relaxation techniques reviewed were progressive muscle relaxation, autogenic training, meditation, applied relaxation, multi-modality, and other techniques unspecified. The findings from this meta-analysis showed that all the relaxation techniques provided a good potential for reducing anxiety. Meditation and applied relaxation produced high effect scores within and between analyses. Progressive relaxation was superior to the other techniques especially with a within group reduction, producing very high effect sizes. Autogenic training was a little lower but still had a positive effect in reducing anxiety for between groups comparison. The multi-modalities approach did not increase the training efficacy on anxiety reduction. Other techniques showed the lowest score, especially in the within group analysis. This data analysis also
proved that using relaxation training is equally effective in reducing anxiety, both in
group and individual sessions.

Another finding of the analysis was the lower potential of multi-modalities to
reduce anxiety. The benefit of using just one technique for the treatment of reducing
anxiety was preferred. The use of breathing exercises was also used, not as a separate
technique, but to enhance the progressive muscle relaxation exercises. The results of the
study were that older people had less benefits from these relaxation techniques that
younger people. This could be due to a lesser understanding of the instructions or
because older people found the practice of physical exercises of the progressive muscle
relaxation to be more challenging.

In a 2010 quantitative study, 177 third grade students were taught relaxation
techniques (Larson et al., 2010). A pretest, treatment, posttest design was used. Training
took place at school for 2 days a week over a 5-week period. A relaxation tape was
utilized to guide them through the relaxation of the muscle groups. At the conclusion of
the 5 weeks, the results indicated a significant difference between the pretest and posttest,
\( t(55) = 2.24, p = .029 \), and \( t(67) = 4.07, p = .000 \), respectively, of the experimental group.
The control group of third graders showed no significant difference between pretest and
posttest, \( t(52) = 0.39, p = .699 \). The relaxation intervention had a significant positive
effect in reducing anxiety.

Rashid and Parish (1998) found similar results in their study to examine the
effects of relaxation techniques on high school students. They compared the efficacy of
behavioral relaxation and progressive muscle relaxation. Behavioral relaxation training
(BRT) is a behavior analytically based procedure that teaches 10 relaxed behaviors
(Poppen, 1998). Each of the relaxed behaviors is a specific body part or action (head, eyes, throat, shoulders, hands, body, feet, breathing, mouth, and quiet). The person goes through a series of behavioral skill training, such as verbal instruction, modeling, prompting, reinforcement, shaping, and corrective feedback. Fifty-five high school students used videotaped instructions for four 20-minute sessions over a 2-week period applying one of these two techniques. Eighteen students participated in the behavioral relaxation group, 20 students participated in the progressive muscle relaxation group, and 17 students were in the no-treatment control group. Unlike the Larson et al. (2010) study, the students were seated in a large auditorium throughout the entire exercise. All three groups completed the State-Trait Anxiety Inventory at the end of the 2 weeks. The results showed that both the behavioral relaxation and progressive muscle relaxation approach were effective in helping high school students reduce their anxiety. The high school students who received either forms of relaxation training demonstrated significantly lower anxiety than the control groups. In terms of which approach could be used in a school setting, the researchers believed that progressive muscle relaxation could be easily incorporated into a school setting, whereas the behavioral relaxation approach was not an option due to the training needed to facilitate the intervention and time involved.

Margolis and Pica (1990) also utilized audiotapes to provide the progressive muscle relaxation exercises to eight adolescents from a private school for students with emotional impairments. By playing the tape Children’s Relaxation Exercises (Lupin, 1977), they explored the benefits of progressive muscle relaxation on the oral and silent reading of adolescents with emotional impairments. This tape was designed to help the
students identify tension by moving between feelings of relaxation and tension. Only four sessions were planned and carried out, and the results showed a positive influence on both silent and oral reading performance of students with emotional impairments. Though the sample size was small and the sessions were limited, the limited purpose of this study was to improve academic achievement and decrease general anxiety rather than provide psychotherapy. The recommendation by the researchers for further study spoke to the idea of teachers being able to take over the program from the school psychologists or counselors.

The question of length of relaxation training required to adequately reduce anxiety on a long-term basis has also been addressed in various studies (Lohaus & Klein-Hessling, 2003; Lohaus et al., 2001; Margolis & Pica, 1990). Lohaus and Klein-Hessling (2003) examined whether the benefits from relaxation training, specifically progressive muscle relaxation and imaginative approaches, would increase if the number of sessions was extended and intensified. One hundred sixty-four fourth and sixth grade students participated in the study. The children individually attended the training sessions of either 5 sessions or 10 sessions, depending on the experimental condition. There were nearly no indicators of increased benefits with extended and/or intensified training although there were immediate benefits from the training. Relaxation techniques can have a significant calming effect in children over shorter treatment sessions (i.e., 5 sessions) as compared to extended sessions (i.e., 10 sessions).

Lohaus et al. (2001) reported their results indicated only short-term effects of relaxation training could be expected. The researchers analyzed the heart rate, skin temperature, mood, physical well-being, and the skin conductance level after using a
relaxation technique of either imagery or progressive muscle relaxation (PMR). They found a physiological pattern that indicated that imagery was more closely associated with relaxation. There were lower heart rates and skin conductance levels on the subjects who participated in the imagery approach versus the PMR, although both approaches showed positive short-term benefits. The reasoning for the heightened heart rate for the participants of the PMR could be from the successive activation of the muscle groups during the training. The immediate effects show that children will benefit from the relaxation training and that the instructions during training may produce a sense of calm, even in very young children. The final word was of caution not to expect long-term benefits, but that short-term benefits of relaxation and feelings of calmness are worthy of the training.

Support for relaxation training in the schools had been suggested for many years. Frederick (1975) spoke of tension, stress, and anxiety being commonly treated by medication, prescriptive and non-prescriptive. Medicine to treat anxiety had become a profitable business and the expedient therapy. Relaxation therapy, outside of medication, had to become part of the public school curricula. Frederick believed the most obvious indicator of tension and stress, and the one most commonly associated with behavior, was muscle tension, not the physical symptoms often treated through medication. His solution to this problem required no sophisticated equipment and needed only minimal training for the teachers. His solution was a tension control program he labeled muscular relaxation therapy, which could be implemented immediately in any school. In his trainings, he encouraged students to note the times of the day when they felt most anxious, such as when driving a car in traffic or beginning a new challenging project. He
trained students to recognize the tension signals and then walked them through the relaxation techniques quickly to reduce anxiety until they were able to independently put these strategies in place. This training would teach the students to learn to relax away unnecessary stress and anxiety in order to perform daily tasks and activities with greater efficiency. Frederick’s thoughts and opinions, though over 35 years old, provide strong support for relaxation strategies and techniques becoming part of the everyday education of public school children. Providing periodic relaxation training to children would provide support in coping with their everyday problems to avoid more severe problems in the future (Lohaus & Klein-Hessling, 2003).

**Deep breathing exercises.** Deep breathing can be defined as slow, diaphragmatic breathing designed to balance the carbon dioxide and oxygen levels in the body (Nassau, 2007). For deep breathing to be most efficient, it was important that the air was inhaled through the nose and exhaled through the mouth. Breathing in this manner would alert the body so it would react with less severe symptoms at a highly anxious time (Zuercher-White, 1998).

In a review of empirical research, LaLande, Bambling, King, and Lowe (2011) examined the claims of the positive mental health benefits of a breathing technique called breathworks. Integrated Breathwork Therapy (IBT) became popular in Europe as a form of psychotherapy and quickly became a component of alternative mental health practices (LaLande et al., 2011), particularly for anxiety and depression. This therapy involved a therapist who guides the patients through a 1-hour process of regulating their breathing. Relaxation and mindfulness exercises are weaved in to the breathwork. It was the conscious connected breathing that set breathwork apart from relaxation or meditation.
techniques. The patients are guided through a continuous, uninterrupted breathing exercise. The breathing was very purposeful with the inhalation being active and involves expanding the upper chest (Minett, 2004). One study they reviewed involved 12 depressed and anxious patients (DSM–III–R) who participated in a 10-session breathing intervention. Ten of the 12 patients made clinically significant improvements ($p < 0.5$) from the pretest to the posttest at the 8-week follow-up. Those improvements had been maintained.

LaLande et al. (2011) found that the breathwork model perspective involves the suppression of feelings, sensations, and emotions experienced as aversive and inhibition of breathing as a central mechanism through which suppression is achieved. The suppression of these inner experiences plays a role in the persistence of anxiety and depression (Campbell-Sills, Barlow, Brown, & Hoffmann, 2006). Inhibited breathing also is detrimental to neurological functioning. With little to no reserve of oxygen in the brain, any change in the levels of oxygen in the blood flow, due to inhibited breathing, can increase the tendency to worry and cause negative affect. Their review supported the idea that sustained inhibited breathing can develop when a person feels anxious. Their overall conclusion was that breathing exercises, as simple as the rhythmic breathing exercises in yoga (da Silva, Ravindran, & Ravindran, 2009) to a more clinical approach such as Integrated Breathwork Therapy, have shown promise in the treating of anxiety and depression.

Another form of breathing exercises that had been found effective in the treatment of anxiety is elevator breathing. One hundred and seventy-seven third grade students were trained in an effort to reduce test anxiety using the relaxation techniques of guided
relaxation and elevator breathing (Larson et al., 2010). Elevator breathing was a deep breathing exercise that incorporates visualization into breathing (Teel, 2005). Children learn to isolate three areas: the head, the chest, and the abdomen. Elevator breathing focuses the children's attention on their breathing rather than what else is going on in their minds or around the room. This can be done in a seated position but for young children, it is helpful for them to do the exercises lying on their back so they can feel their breath moving up and down their bodies like an elevator. Participants practiced elevator breathing exercises at each session for 5 minutes. The results of this study showed a significant decrease in anxiety at the posttest. There was no significant decrease in anxiety levels for the control group. There was also no significant difference in test scores between the students who participated in the relaxation techniques and the control group. This may have been due to the fact that the students overall were or were not good test takers. What was important was the acknowledgment that children can successfully learn and utilize relaxation techniques so as to gain some control over how they respond to anxious situations or events. Controlling the breathing was essential to stop the panic, and relaxation reduced anxiety-related tension (Wehrenberg, 2008). Many researchers have found that the negative aspects of anxiety can be reduced if the student believes he or she has some degree of control over his or her environment (Friedman et al., 1983).

Breathing exercises have often been studied to explore their benefits on various health concerns. Han, Stegen, De Valck, Clement, and Van De Woestijne (1996) conducted a study on breathing therapy. They explored the influence of breathing therapy on complaints, anxiety, and breathing patterns of patients with hyperventilation
syndrome and anxiety disorders. Ninety-two patients who had a current diagnosis of hyperventilation syndrome (HVS) participated in this study. Fifty-three of these participants also had a diagnosis of anxiety disorders. Each patient was retrained to use slow breathing, using more abdominal breathing and less breathing through the upper part of their thorax while working with a physiotherapist. They were evaluated in the beginning of the study, then completed seventeen 45-minute training sessions for 2.5 months and then evaluated again. The results of this study showed a positive improvement in 10 of the 16 complaints. Anxiety had decreased, and the breathing retraining had significantly modified their breathing patterns. The patients learned to breathe slower and the older patients learned to breathe deeper. Overall, breathing therapy appeared to be an effective therapy for a number of complaints and anxiety for patients with both hyperventilation and anxiety disorders.

A simple tool used to teach healthy breathing was designed by Orth in 2011. She introduced this device for teaching even the youngest student to learn and practice this simple, yet powerful skill. Orth was a health and wellness teacher and designed a deep breathing Web app to quickly calm classrooms and improves the students’ ability to manage their emotions and behavior. The teachers displayed the app on an interactive whiteboard and used the related lessons and activities to teach students the positive health benefits of deep breathing. It was critical that all young people learn to manage their stress and anxiety and reduce their risk of long-term health effects (Orth, 2011). The practice of relaxation and deep breathing have become widely used in contemporary medical practices because of their protective and repairing benefits (Orth, 2011). The
breathing app allows the teachers a simple tool to teach coping strategies and empower the students with lifelong coping skills.

**Mindful breathing and progressive muscle relaxation.** Breathing to decrease feelings of anxiety takes a focused, active mindset. Children and adults have to be taught to breathe mindfully. They are taught to become aware of the physical sensations, especially those associated with deep breathing. They are invited to notice when their minds wander and then to gently bring their thoughts back to their breathing. Feldman, Greeson, and Senville (2010) randomly selected 190 undergraduate students and assigned them to participate in one of three 15-minute stress-management exercises. Mindful breathing (MB), progressive muscle relaxation (PMR), and loving kindness meditation (LKM) were the three techniques chosen with a prediction that the MB would provide the greater decentering of the three. Decentering, as defined by the authors, was the ability to consider multiple aspects of a situation, a skill that was important when coping with stress and anxiety. Piaget’s (1970) Theory of Development also speaks to decentering as part of the third concrete operational stage. Children between the ages of 7 and 12 started to show an increase in the use of logic when as they developed the ability to decentralize. The participants in this study completed the 15-minute session and then immediately after, completed measures of decentering, frequency of repetitive thoughts during the exercises, and degree of negative reaction to those thoughts. As predicted, Feldman et al. (2010) found that MB resulted in higher scores on the decentering scale than PMR or LKM. There was also a stronger association between the number of repetitive thoughts and the negative reactions to them in both PMR and LKM than in the MB group. There was an increase in repetitive thoughts for the MB group but the authors felt that was due
to the participants being asked to notice thoughts. There was a decrease in the negative reaction to these thoughts. This finding was important for people with anxiety, as they can have repetitive thoughts but their reactions to those thoughts do not inhibit their ability to function. This study strongly supported the use of mindful breathing as the psychological benefits go above and beyond other credible anxiety-reducing exercises.

Positive self-talk. Hackfort and Schwenkmezger (1993) define self-talk as “a dialogue through which the individual interprets feelings and perceptions, regulates and changes evaluations and convictions, and gives him/herself instructions and reinforcement” (p. 355). It is common of children and adolescents with anxiety to have irrational or maladjusted beliefs, thoughts, or self-talk. These children and adolescents often show a distortion in information processing, an inaccurate memory of distressing events, and a tendency to interpret everyday situations as threatening (Vasey & MacLeod, 2001). Studies have shown that self-talk influences anxiety and that excessive anxiety interferes with both current behavior and the ability to learn new behaviors (Friedlander, Keller, Peca-Baker, & Olk, 1986). Since self-talk can often lead to a self-fulfilling prophecy, uncountered negative self-talk can be detrimental to a child’s quality of life.

Hiebert, Uhlemann, Marshall, and Lee (1998) studied the relationship between self-talk, anxiety, and counseling skills with 95 counselor interns who were given the Counselor Self-Talk Inventory (CSTI), a 50 true-false item inventory that identifies the nature of the counselor-trainee self-talk during a counseling interview. The State Scale of the State-Trait Anxiety Inventory was also administered to assess anxiety. Finally, a 20-minute videotape of each intern’s performance was submitted and analyzed by trained instructors with doctoral degrees in counseling. The findings showed that higher levels of anxiety
were closely correlated with higher levels of negative self-talk and lower levels of positive self-talk. The videotapes showed evidence of a positive correlation between high levels of anxiety and lower levels of performance from the interns. By decreasing the negative self-talk, anxiety may also decrease and the performance level may increase.

Kendall and Ronan (1997) studied 542 children from ages 7 to 15 who were administered the Negative Affectivity Self-Statement Questionnaire for Children (NASSAQC), which assessed self-statements that were associated with anxiety and depression in children and adolescents. The study incorporated the States-of-Mind (SOM) model, which supports the idea that negative self-talk was more influential on increasing levels of anxiety than positive self-talk was on decreasing anxiety. The findings support utilizing a treatment that decreases negative self-talk because negative self-talk is the primary influencer on emotional adjustment.

Cognitive therapy techniques designed to modify the maladjustment of self-talk have been used to treat children with anxiety. Though younger children may have a difficult time identifying their self-talk due to not being developmentally mature in metacognition, by the age of 7 or 8, most children have acquired the ability to “hear” their own self-talk. One technique that has worked with younger children when anxious is the verbalization of what is in their “thought bubble” (Kendall, 1994). Children are shown cartoons with thought bubbles and asked what is in their thought bubble. Once that terminology is learned, it can just be suggested at a time of anxiety for the young child to begin to identify his feelings and thoughts. An adult can then talk the student through a more accurate, rational analysis of the situation by asking simple questions such as, “Has this ever happened before?” or “Would it really be so bad if it did happen?”
The students can begin to add coping thoughts into their repertoire to use later in order to counter their negative thoughts.

Older children are given direct instruction in first identifying negative self-talk and then intentionally stopping the inner voice by concentrating on something else. By supplementing the negative with neutral or positive statements, or asking questions of “Has this ever turned out poorly?” or “What is the worst that can happen?” students with a strong cognitive ability can “talk” their way through. They will begin to decrease the amount of negative talk or the time it takes to switch the thinking gears. The facilitator of the anxiety-reducing strategies would assist during the exercises by saying things, such as, “If you find your mind wandering, bring it back to thinking about what your muscles are doing right now.” “How is your body feeling?” “Can you see in your mind’s eye, the tension and anxiety flowing out of your body?” Armed with coping thoughts, the student will be able to change behavior and reduce the overwhelming feelings of anxiety. The cognitive therapy techniques utilize this method to help students and adolescents with anxiety (Gosch et al., 2006). It is easy to use these strategies right the classroom for the benefit of all students.

There was research where the researchers have investigated the effect of positive and negative self-statements by teacher and parents on the self-talk of students with anxiety. Burnett (1995, 1999) conducted two important studies supporting the link between how people talk to these students and the students’ self-talk and performance. In his earlier study, Burnett (1995) interviewed 675 elementary school children using the Self-Talk Inventory (STI) and Significant Others’ Statements Inventory (SOSI). The purpose of the study was to study examine the relationship between self-talk and other
significant people’s positive and negative statements. The results of the study showed when that significant others’ in their lives talk positively to them, the children overall had higher positive self-talk and lower negative self-talk. The children tended to have a higher level of negative self-talk and a lower level of positive self-talk when significant others talked negatively to them.

Burnett (1999) investigated the effects of self-talk between positive and negative statements that were made by teachers and students’ academic self-confidence in reading, math, and learning. A sample of 269 students in grades 3 through 7 participated. Again, the Significant Others Statement Inventory (SOSI) and the Self-Talk Inventory (STI), in addition to a Reading and Math Self-Concept Scale developed by Burnett, the results showed that positive self-talk positively correlated with perceived frequency of positive statements by the teacher and the students’ reading self-concept. It was also found that positive statements by the teacher had more influence than negative influence on positive self-talk by the students and math and learning self-concepts. Negative statements by the teacher were not found to be a predictor of any of the self-talk or self-concepts variables.

Relaxation techniques have been found to be highly effective and have produced long-term benefits in treating children, adolescents, and adults for anxiety (Rasid & Parish, 1998). Relaxation training is effective in reducing anxiety in any kind of participant, male or female, young or old, affected or not by physical or psychological disorders (Francesco et al., 2009). There have been multiple research studies examining the effectiveness of different approaches of relaxation techniques (Francesco et al., 2009; Franek, 2006; Kokoszka, 1990; Lantieri, 2008; Larson et al., 2010; Lohaus & Klein-Hessling, 2003; Lohaus et al., 2001; Manzoni et al., 2008; Orth, 2011; Poppen, 1998;
Rasid & Parish, 1998; Zalaquett & McGraw, 2000). Many of these techniques require extensive training, a facilitator highly trained in the technique, and time to deliver the treatment.

**Chapter II Summary**

Relaxation techniques have been found to be highly effective and have produced long-term benefits in treating children, adolescents, and adults for anxiety (Rasid & Parish, 1998). Relaxation training was effective in reducing anxiety in any kind of participant, male or female, young or old, affected or not by physical or psychological disorders (Francesco et al., 2009). All of these techniques have been shown to significantly reduce anxiety levels in children and adolescents who have difficulty relaxing when in anxious situations (Zuercher-White, 1998). They are not time intensive, require minimal training, are cost-efficient (Page, 1999), do not need any specialized equipment or music, and can easily be learned and used immediately anywhere, inside of school or out, and are virtually invisible to the human eye.

This literature review highlighted the seriousness of anxiety in children today and various treatment options. This is a fast growing concern with 1 in 5 children in the United States suffering from some degree of an anxiety disorder (National Institute of Mental Health, 2008). The need for treatment can no longer be ignored with anxiety becoming one of the most common and wide-spreading mental illnesses, and the school setting is ideal for such treatment. Studies have shown that anxiety and stress can negatively affect the physical and emotional state of children and adolescents and can develop into many challenging issues such as school absenteeism, low self-concept, verbal and nonverbal problems, deficiencies in academic performance, behavioral
problems, heightened dependence, adult attention seeking behaviors, and difficulties staying on task (Allen & Klein, 1996; Orth, 2011). Anxiety and stress can turn into more serious medical issues such as high blood pressure, heart disease, obesity, and depression, if left untreated. With increased incidents of anxiety and its manifested health issues, it is critical that children and adolescents are taught to manage their anxiety and stress so they can reduce the risk of long-term health concerns (Orth, 2011). Knowing that only one third of people who struggle with anxiety actually seek treatment (Rachman, 2004), providing treatment in the classroom as part of the curriculum would reach many more children and adolescents before their anxiety manifests into serious life-long health issues. Let us now turn to Chapter III, which reviews the methods of my research.
CHAPTER III
METHODOLOGY

The purpose of this chapter is to describe the research design and methodology of the study. The intent of this study was to hear the voices of sixth grade students as they experienced and responded to anxiety prior to, during, and after instruction on anxiety-reducing strategies that are embedded in their classroom instruction. This chapter provides an overview of the purpose and method; describes the research approach; discusses the population and site; presents the research questions and instrumentation, data collection, and analysis; and discusses the limitations and delimitations of the study.

Overview of Purpose and Methods

The purpose of this study was to understand how students in a sixth grade class experienced and responded to anxiety prior to, during, and after receiving instruction in anxiety-reducing strategies that are embedded in their classroom. To gain a rich understanding of these experiences, semistructured open-ended questions and prompts looking for depth and meaning were necessary. For this reason, a quantitative approach is not appropriate for this study. Quantitative research would be the best approach when looking for the cause and effect, the “why” of an issue. A qualitative study was interested in “what” the students experienced and “how” they respond to it (Moustakas, 1994). Qualitative methods allow the researcher to have an interpretive, naturalistic view of students in their natural environment. The researcher then attempts to make sense of a phenomenon and the meaning the students attach to this phenomenon (Denzin &
Lincoln, 2005). Qualitative research allows the researcher to collect data that provides a rich description of people’s individual and collective social actions, beliefs, thoughts, and perceptions (McMillan & Schumacher, 2006). This type of investigation tends to be more open-ended, less specific, and evolving rather than static and process-oriented (McMillan, 2008). My qualitative study used an inductive approach and there were no assumptions made before the data collection and observations. Themes and patterns emerged during and after the data collection (Newton & Rudestam, 2001). This approach allowed the investigator to explore, discover, and construct meaning with a wide-angled lens, using more constructivist claims to develop new knowledge.

The action research case study approach of qualitative research, with phenomenological style questions, was ideal for my study as it provided the vehicle to describe the meaning of the lived experiences of these individuals dealing with this phenomenon (Creswell, 2003). This approach served to study the way individuals interpret themselves, their experiences, and the world in which they live (Mertens, 2005).

**Ethics**

Approval was be sought and obtained from the Human Subjects Institutional Review Board (HSIRB). The district superintendent provided approval to approach the school for participation, and the principal of the school affirmed that approval. Additionally, in the central office capacity, I, as the investigator, had worked with the school to identify and implement the anxiety-reducing strategy program into their sixth grade classes; thus, the anxiety-reducing strategy program had already been established as part of the school curriculum and was available to sixth grade students, regardless of the presence or absence of a formal diagnosis of an anxiety disorder.
Research Approach

After reviewing my proposal with the Human Subjects Institutional Review Board (HSIRB), the research design was revised to be a curriculum program that would involve all sixth grade students. The study was focused on experiences and responses to instruction in anxiety-reducing strategies in the school environment, with no attention brought to family dynamics or an environment outside of the school. The research design included instruction in three research-based anxiety-reducing strategies: (a) progressive muscle relaxation, (b) deep breathing, and (c) positive self-talk.

This study was focused on a program and not individuals, so a Passive Consent Form (see Appendix H) was sent to parents near the end of the study, giving them an opportunity to opt out of using their child’s data in this research and future research projects. Two Passive Consent Forms were returned and these two journals were pulled from the data analysis. The intent was to learn from sixth grade students as they experienced and responded to anxiety prior to, during, and after receiving instruction in anxiety-reducing strategies that were embedded in the classroom. This study was conducted through a blending of action research, case study, and phenomenology methods. Specifically, this study was a bounded case involving sixth grade students from a single setting where half of the sixth grade students in an Information Literacy class received instruction on anxiety-reducing strategies during their class time, while the other half of the sixth grade students did not. Data collected for this study included student responses to questionnaires, student journal entries, and the researcher’s observations and field notes. The treatment for this action research case study was a 10-session unit of instruction designed to achieve the following goals:
1. Identify the anxious feelings of students;
2. Identify which situations made students anxious;
3. Provide students with strategies to manage anxiety;
4. Engage students in reflections on their experiences with anxiety and their use of the strategies to manage anxiety.

**Research Questions**

There has been a substantial gap between the phenomenon of anxiety in school and the voices of the students. The following overarching research question was therefore investigated to gain a deeper understanding of what these students experience:

*How do sixth grade students experience and respond to anxiety prior to, during, and after receiving instruction on anxiety-reducing strategies that are embedded in the classroom?*

Additional subquestions were explored:

1. How do sixth grade students describe their feelings and behaviors with anxiety before being taught anxiety-reducing strategies?
2. How do sixth grade students engage with and respond to the instructions on anxiety-reducing strategies during the anxiety-reducing lessons?
3. How do sixth grade students, who complete a 10-lesson unit on anxiety-reducing strategies, assess their experience and describe how they will use them in the future?
4. How do the sixth grade students who complete the 10-lesson unit on anxiety-reducing strategies compare to the control group who did not complete the 10-lesson unit, regarding the ways they describe responding to anxiety-producing situations at school?
Population and Site

Population

One hundred fifty-four students in sixth grade participated in anxiety-reducing strategies during their regular classroom experience. The experimental group was made up of 67 girls and 84 boys, ages 11–13. Though 91% of the students were Caucasian, there were 1% African Americans, 4% Hispanics, 1% American Indians, and 3% Multiracial. The other half of the sixth grade class served as the control group. The demographics of the control group were similar but not detailed for this study. This group was taught by another teacher at same time periods as the participants. Their involvement in this study involved completing a three-item pre-questionnaire and a three-item post-questionnaire given a week before the 10 sessions began and a week after the 10 sessions ended, respectively.

The benefits of learning and using anxiety-reducing strategies could be beneficial in and out of the classroom because all students experience anxiety at different levels at different times of their lives. This age group was specifically chosen for this study because at this age (11–13 year olds), anxiety tends to move from concrete specific fears to more abstract worries and interpersonal concerns that can really interfere with the learning process (Masia-Warner et al., 2005).

Site

The site for this study was a Midwestern suburban middle school where the teachers planned to embed instruction on anxiety-reducing strategies into their regular class instruction. The school district had approximately 3,800 students, of which 966 attend the middle school. The middle school was comprised of grades 6 through 8. In
2012, the school had a graduation rate of 91.42% compared to the state average of 75.96%. The attendance rate was 96.4%. The student population was made up of 89% Caucasian, 3% Hispanic, .7% American Indian, 1.4% Asian, 2.2% African American, and .07% Native Hawaiian. The school offers a rigorous curriculum with strong instructional standards for teaching and learning. Community, teachers, students, and parents have collaborated to ensure an exemplary program. With the implementation of a rigorous state high school curriculum, the expectations are higher than ever and the district has worked hard to provide the supports and opportunities for students to be successful in their educational journey. The typical student in this school and school district is a high achiever. PSAT scores are regularly in the mid 40s. ACT testing scores average at 23. State assessment scores are consistently some of the highest in the region of the state where the school is located.

A class developed specifically for sixth grade students, called Information Literacy, was chosen because all sixth grade students have to take this class. The intent of this class is to fill the gaps of learning needed to gain mastery over skills that are necessary to succeed at the secondary level. Topics such as note-taking, organization, purposeful reading, informational reading and writing, supporting writings with evidence, and team building exercises are taught. Teaching anxiety-reducing strategies fit well into the intent of this class.

**School Environment**

This study focused on the school environment and situations of and responses to anxiety while in school. The intent of this study was not to involve the factors of the family or outside environment that may cause anxiety but to provide students with tools
to empower them in times of anxiety during the school day. As an investigator, I did not provide counseling to students but provided a program to assist students during stressful times. Keeping this study within the realms of the school environment kept it tightly aligned to the purpose of the study.

The Investigator

As with qualitative research, the role of the investigator was primary and interactive. Since a human is the primary instrument of a qualitative study, the majority of the data came from this source. The observations, interpretations, and analysis are therefore filtered through the investigator’s eyes and experiences. To take biases into account and to provide a sense of truthfulness to the study, I, as the investigator, must discuss my values, beliefs, assumptions, and biases that I may bring to the study (Locke, Spiruso, & Silverman, 2000; Mertens, 2005). To present an unbiased attitude, the investigator, through a process of self-disclosure, shared my background and attitudes about the phenomenon before starting the experiment. By making my assumptions known, other researchers can then look at the data and interpret it differently according to their experiences.

Over the past 29 years, I have worked with students with Individualized Educational Plans (IEPs), 504s, and general education accommodation plans. I have facilitated many committee meetings for the gifted and talented cohort. I bring to this study my personal experiences of working with hundreds of at-risk students and their families to provide a free and appropriate education. I do not often work directly with the students but more with the families and school personnel to provide the best educational opportunities possible.
At this district, there are a significant number of diagnosed cases of anxiety in first grade through the senior year based on the number of 504s and IEPs that address anxiety. Anxiety is often a part of the discussion when talking with parents and teachers about the students’ struggles. Multiple hours have been spent with outside experts who work with these students on coping with their anxiety. I have spent hours working with educators to gain understanding and compassion to support these students. Educators need tools and knowledge to better understand and help these students. This understanding and the desire to make a difference by bringing new knowledge to this issue is the basis for this research study.

**Instrumentation**

All sixth grade students, both the participating group and the control group, were given a three-item pre-questionnaire the week before the 10 sessions began (see Appendix I). The pre-questionnaire was comprised of three questions related to the research questions:

1. In the past couple of weeks, have there been times in school when you have felt anxious? Briefly explain.
2. What did you do when you felt anxious during those times?
3. What else do you know about handling situations that make you feel anxious?

To introduce the pre-questionnaire, the teacher read a short script explaining why the students were being asked these questions.

The week following the conclusion of the 10 sessions, the teachers of both the participating and the control group again read a short script and the students completed a
three-item post-questionnaire (see Appendix J) of the same questions as the pre-questionnaire.

The instruments used for the strategies came from a relaxation and breathing CD (McKay & Fanning, 2008) and one written script, created by the researcher, that guided students through the self-talk exercises (see Appendices C and D). The CD provided the progressive muscle relaxation exercises and four deep breathing exercises. The script for the positive self-talk provided 12 student-selected positive self-talk phrases to be used throughout the sessions. The initial written script introduced this strategy and explained the potential benefit of phrases to the students.

**Anxiety-Reducing Strategies**

This study was designed around the instruction and practice of three researched-based anxiety-reducing strategies taught during the class time. The strategies provided data on how the students engage with the strategies. The three strategies provided the students with the tools to potentially rise above the constraints of anxious situations without waiting for someone else to set up the conditions or facilitate the work. The strategies were practical, not time-intensive, required minimal training, were cost-efficient, could be taught by anyone with minimal training, did not need specialized equipment or music, and were virtually invisible to the human eye. The strategies could easily be learned and used immediately anywhere in the school day. How students engaged with and responded to the instruction on these anxiety-reducing strategies provided the data for the research question, specifically subquestion 2: How do sixth grade students engage with and respond to instruction on anxiety-reducing strategies during the anxiety-reducing lessons?
Progressive Muscle Relaxation (PMR) and Deep Breathing

“Progressive Relaxation and Breathing” by McKay and Fanning (2008) was an audio program that guided the participant through a complete introduction to the Edmund Jacobsen technique (Conrad & Roth, 2006) for progressive muscle relaxation and deep breathing exercises. The CD was divided into eight parts:

- Hands and Arms (4:46)
- Head, Neck, and Shoulders (5:44)
- Chest, Stomach, and Lower Back (3:35)
- Legs and Feet (7:44)
- Deep Breathing (3:42)
- Complete Natural Breathing (5:31)
- Energizing Breathing (4:30)
- Alternative Breathing (3:40)

During the beginning of the sixth grade Information Literature class, the students were led through two muscle sections and one breathing exercise each session. By the end of the week, with sessions 2 days a week for 15–25 minutes, the students participated in the full body progressive muscle relaxation exercises and learned two breathing techniques to help reduce anxiety and stress.

Students participated in these exercises while sitting in their seats or standing alongside their desks. The researcher, along with the teacher, observed on the side of the classroom. The co-investigator facilitated the session by playing the CD and participating in the exercises modeling the technique as directed in the instructional plan. The instructional plan detailed the specific sections of this CD to be played for each
session, to include two sections of the body for the muscle relaxation and one breathing technique. This CD was used for 15–20 minutes every session, with 5–10 minutes for the journaling. The instructional plan detailed the time allowed for each activity, the specific activity, all the verbal instructions, and the instructional strategy used for each activity.

**Positive Self-Talk (PST)**

A positive self-talk script was provided for each session by the investigator to the co-investigator (see Appendix C) and was detailed in the instructional plan. Questions such as “What do you say to yourself when you start to feel anxious?” and “Do you know what to say to yourself before, during, and after the times you feel anxious?” were discussed to introduce the strategies. It was important for students to understand what they said to themselves would have an impact on their ability to successfully handle anxiety and stress (Gosch et al., 2006). The self-talk script took 5 to 7 minutes to administer and reflect upon. This strategy began with the investigator first reading the typed script to introduce this strategy. After the script was read, the collaborating investigator read through the list of 12 positive self-talk phrases (see Appendix D). This list of 12 positive self-talk phrases was chosen by a random group of sixth grade students who did not participate in the study. The random students were given a list of 28 positive self-talk phrases and were asked to circle the top 10 phrases they would most likely use when they became anxious. Their choices then made up the list of 12 were used in this study. Each student had a copy of the self-talk phrases to read along. Students read along, saying the phrases aloud or silently.
Journaling

The journal entries provided the data on how the students responded to the strategies. Through the journal writing, the investigator created the opportunity to collect spontaneous, open-ended data at different points of the study. These data points were intentionally included in a detailed instructional plan (see Appendix E). The data came naturally as part of the class to help the students become and remain engaged with the content and experiences. During the journal writing, the investigator took a more active participatory role, allowing for relationships and trust to be built through semi-structured open-ended questions and prompts that were intended to encourage honest views and opinions by the participants. It was very important to convey an attitude that the participants’ views were very valuable and useful to the study. To be most effective, the journal style interviews were more conversational than formal. Open-ended questions and prompts allowed for more flexibility and responsiveness by the participant where new ideas or thoughts can emerge without threat or direction. The investigator also encouraged students to identify their feelings by using this tool to write, draw, reflect, and communicate how they were feeling or what they were thinking in regard to anxiety and the strategies that they learned and responded. Journaling took place at different times throughout the 10 sessions. Specific instructional strategies, such as reflection of prior lessons or school experiences, using prior knowledge to add to current thoughts, and memory challenges to remember the 12 self-help phrases learned, were embedded in this exercise as specified in the instructional plan. Journals were collected and analyzed weekly, using the saturation method of data collecting. Using a journal as a data collection tool and the investigator as an active participant allowed the investigator to
more naturally explore, probe, or ask clarifying questions. This provided rich data in the form of an ongoing, naturally produced by-product of the study.

**Roles of the Investigator and Collaborating Investigator**

The strategies were facilitated by the Behavioral Interventionist from the middle school. She was a certified guidance counselor with a minor in psychology and has worked in this capacity in the district for over 18 years. She was a collaborative investigator for this study. The students were very familiar with her. Her role was almost silent in that she turned the CD for the progressive muscle relaxation (see Appendix B) on and off at specified points, as well as read the scripts for the positive self-talks (see Appendices C and D). She also modeled the exercises by demonstrating in front of the class. She did not add her feelings, thoughts, or experiences, nor did she use a journal to communicate her experiences.

The investigator assumed the role of a silent observer in the back of the room, along with the teacher, who acted as an additional observer while the CD played. The investigator and teacher used an observation document to document evidence of participation in the three anxiety-reducing activities, watching for full, partial, or no participation (see Appendix F). Seating charts for each class period (see Appendix G) were used to record data of the participation at 3-minute intervals.

**Sessions**

The sessions began with an introduction to the students of the investigator and the project. The investigator read the introductory letter (see Appendix A) and explained the roles of the collaborating investigator and the teacher. The participating group of sixth grade students was given a blank journal to be used weekly to identify, reflect upon, and
communicate their experiences before, during, and after the strategies were taught. Words and pictures were allowed to express feelings, thoughts, and observations of students’ reflections of the three anxiety-reducing strategies. The majority of the writing in the journal was unstructured, open-ended, and free-flowing, although a few prompts were provided from time to time, such as:

1. When do you know about anxiety in school?
2. What does your body do when you feel anxious in school?
3. What does anxiety “look” like?

Each session was made up of at least two of the three research-based anxiety-reducing strategies. Progressive Muscle Relaxation (PMR) and deep breathing were taught and practiced at every session. By the fourth session, positive self-talk (PST) was introduced by the investigator as the third anxiety-reducing strategy.

The instructional plan (see Appendix E) was used at each session to structure the lessons. The co-investigator conducted all of the physical modeling of the progressive relaxation exercises, the breathing exercises, and the self-talk phrases. The investigator took an active role during the journaling of each session. The classroom teacher observed at the side of the room during each session.

In total, there were ten sessions ranging from 15 to 25 minutes long. These sessions occurred twice a week in five periods a day. The sessions were held in the beginning of the 55-minute class period.

**Session One**

Session one began first hour with the investigator reading the letter of introduction to the class. Journals were handed out and the investigator shared the
purposes of the journal. Students were to reflect and share their experiences before, during, and after the anxiety-reducing strategies were taught and practiced. The investigator ensured the students there was no penalty for spelling errors and their response could comprise of pictures, words, labels, or full sentences.

Prompts were given for the first journal entry to give everyone a starting off point. The investigator told the students to use what they knew and what they just learned to be able to respond to the following prompts:

1. What do you know about anxiety?
2. What does your body do when you are anxious?
3. What does anxiety look like?

**Session Two**

Progressive muscle relaxation and breathing were the first anxiety-reducing strategies taught in session two. The co-investigator turned on the relaxation CD and sat in a chair in the front of the room and demonstrated the exercises. The relaxation exercises focused on the arms and hands. Students remained in their seats as the relaxation exercises moved into the breathing exercises. The first breathing technique was deep breathing. The CD taught the correct way to sit to maximize relaxation. The investigator and teacher sat at the side of the room to observe. The documentation form and seating chart were used to capture data at one minute intervals. The CD lasted for 8 minutes and 22 seconds. The students were instructed to reflect on their first experiences with the anxiety-reducing strategies after the exercises.
Session Three

Session three started with a writing prompt. The investigator asked the students to reflect on their drawing or writing from the last session and add their thoughts to what they wrote or drew in their journals.

Next, the co-investigator sat in a chair in front of the room and turned on the relaxation CD. The students learned the relaxation techniques for the head, neck, and shoulders. The breathing technique that followed the relaxation exercise was the natural breathing. The CD explained the difference from the deep breathing and when natural breathing would be most effective.

Session Four

The investigator started session four by reading the positive self-talk script. The students were each given a sheet with 12 positive self-talk phrases. The co-investigator then read each phrase, asking the students to read along aloud, read silently to themselves, or close their eyes to visualize the words in their minds. The students wrote or drew in their journal about their first experiences with positive self-talk. The investigator asked them to circle two to three phrases on their sheet that they each liked best. In their journal, they explained their choices.

Progressive muscle relaxation exercises followed the positive self-talk. The co-investigator sat in the chair and turned on the CD to the chest, stomach, and lower back section. Students were instructed to sit in the relaxed position taught on the CD. Energized Breathing followed the relaxation segment.
Session Five

Session five began with 7:44 minutes of progressive muscle relaxation in the legs and feet. The fourth breathing technique, alternative breathing, followed for an additional 3:40 minutes. The investigator and the teacher observed from the side of the room. The co-investigator sat in her seat, turned on the CD, and completed the exercises.

The investigator had earlier written the two writing prompts on the white board in the back of the room. The investigator reminded the students that there were no rules to their writing and they could draw, label, or just write words to reflect on their experiences. The two prompts were:

1. Have you used the progressive muscle relaxation exercises you have learned so far? If not, have there been times in school when you could have used the exercises?

2. Have you used any of the breathing exercises you have learned so far? If not, have there been times when these breathing techniques may have helped?

A brief positive self-talk activity provided another opportunity to read through the 12 positive self-talk phrases. The co-investigator read the phrases out loud while the students read along with her, read silently to themselves, or closed their eyes to visualize the phrases. The positive self-talk was followed by one prompt:

1. Have you tried any of the 12 positive self-talk phrases you learned or other phrases you have of your own? If not, can you think of a time in the last few days when positive self-talk may have helped you?
Session Six

The students had learned and practiced all four body sections on the relaxation CD. Session six was the first time the students completed the total body relaxation. The exercise lasted 21 minutes and 49 seconds. The journal asked the students to respond to their experiences of doing the total body. They were asked to compare how they felt with other times in their lives when they have felt relaxed.

Session Seven

The investigator directed the students to think over their last week or so. Did they have a test? Did they have to do a presentation? Did any of the students try something he or she had never done before? How did they feel? Did they use any of the strategies they had learned so far? If so, which one? How did it make them feel? If not, why? The students recorded their thoughts in their journals.

Both deep breathing and complete natural breathing were practiced. The co-investigator started with a think aloud to get her body in the best position to relax. The students changed their sitting positions to match.

The positive self-talk exercise comprised of each student turning to the neighbor on their right and sharing a favorite phrase, then turning to the person on their left and sharing a second favorite phrase.

Section Eight

Two anxiety-reducing strategies were practiced in session eight: (a) upper body muscle relaxation, and (b) energizing and alternative breathing. The co-investigator sat in her chair, turned on the CD, and did a think-aloud to move her body into the learned position. The investigator and teacher sat on the side of the room to observe. Students
wrote about their experiences in their journal. The investigator asked the students to write in five words or less how they felt and add one picture to their words.

Section Nine

The investigator began the session by doing a class activity of memory. The class together had to remember as many of the positive self-talk phrases without looking. After 4 minutes of students calling out various phrases, the students took out their sheets of the 12 phrases and shared the ones that were missed. In their journals, they recorded 2 of the learned phrases they felt best fit them and one of their own.

The co-investigator prepared the students for the deep breathing exercise. She told them that the practice would be without the CD, just prompts from her. She led them into the head, neck, and shoulders relaxation exercises with no CD, just prompts from her.

The journal prompts were written on the whiteboard in the back of the room. The investigator shared that the prompts were written just to get them started but the students could write what ever came to mind about the three anxiety-reducing strategies. The prompts were:

1. The anxiety-reducing strategy that helped me the most is_______ because _____.
2. One time when I used one of the strategies was _______________________.
3. What do you like the best about the anxiety-reducing strategies? What don’t you feel comfortable with?
4. When do you feel most comfortable using the anxiety-reducing strategies in school?
Session Ten

The last session started with the students journaling about their experiences in the 10 lesson unit on anxiety-reducing strategies. Prompts were provided on the white board in the back of the room to facilitate thinking. The final prompts were:

1. What I liked the best about these strategies was ________________.
2. I think I will use these strategies when ________________.
3. Do you feel you are better able to control your anxiety and stress now than you were before learning the strategies? Why or why not?
4. Your additional thoughts or comments?

Each class chose their favorite body relaxation exercise and their favorite breathing technique to practice. The co-investigator facilitated by sitting in a chair in the front of the room and practicing the exercises with the class.

Students shared their favorite positive self-talk by raising their hands and taking turns. They were allowed to use their own or one of the 12 phrases from the sheet given during the fifth session.

Data Procedures

Data Collection

Qualitative interviewing is not about getting the answers to the questions, but more about understanding the experiences of the individuals and finding meaning in those experiences. Seidman (as cited in Marshall & Rossman, 2006), suggests a three-step approach to the interview questions: (a) focus on the past experiences of living with this phenomenon, (b) focus on the present experiences, and (c) join the two to richly describe
the individual’s experience with this phenomenon. This study involved five sources of data:

1. Pre-questionnaire
2. Journal questions and prompts
3. Observations during lessons/instruction on anxiety-reducing strategies detailed on an instruction plan
4. Field notes
5. Post-questionnaire

All sixth grade students completed a three-item pre-questionnaire administered by their teacher the week before the 10 sessions began. These data were collected by the investigator from the teacher.

Another source of data was a natural, ongoing phenomenology style of questioning and prompting through the use of a journal kept by each student throughout the experience. There was no scripted dialogue or limitations as to what they wrote, how they wrote it, or the length of their responses. The journals were designed to be semistructured and open-ended. The students were given blank notebooks in which to record their feelings, thoughts, or short responses to the instructional strategies before they began the strategies, while they were participating in them, and after the conclusion of the strategies. Students were asked to respond to three short questions as their first entry:

1. What do you know about anxiety? Draw a picture, or several, to help explain your thoughts.
2. What does your body do when you are anxious?
3. What does anxiety “look” like?

The weekly responses provided a natural free-flowing by-product of the instructional plan. These journals provided the researcher with frequent, powerful data points throughout the study. They were collected at the end of each week for data analysis.

A third source of data came directly from the observations during the strategies of the investigator and the teacher who taught this class. There was formal data collection using a coding document (see Appendix F) and seating charts of each class (see Appendix G) by the investigator and informal observations from the teacher. The role of the teacher was to be a co-observer, not a participant. She was not asked to impact or change the classroom environment. She served as a second observer. The investigator of this study had a dual role: to be an active participant when providing guidance for the journal writing and then to switch to an observer in the back of the room, with the teacher during the actual strategies.

Another source of data were the field notes taken by the investigator during the learning and practicing of three strategies. The investigator was in the room at all sessions and took field notes during all sessions.

The final source of data collection was the three-item post-questionnaire administered to all sixth grade students, including those who the participated and those students comprising the control group. These questionnaires were collected at the end of the day by the investigator.

It is important to note that the parents of the participating sixth grade students were sent a Passive Consent form (see Appendix H) asking for permission to use the data collected for the study. Parents were informed that there would be no identifying
information in the data. They were asked to return the signed and dated form only if they did not wish to allow the investigator to use the data from their child’s experience.

**Data Analysis Plan**

The analysis steps used for this study followed the guidelines by Marshall and Rossman (2006) and involved seven steps:

- Organizing data
- Immersion in the data (observations, field notes, weekly journal entries)
- Generating categories and themes
- Coding the data
- Offering interpretations through analytic memos
- Searching for alternative understandings
- Writing the report to present the study

In vivo coding was used, giving exact words of the participants to the names of the categories or themes (Creswell, 2007). Stake (1995) discussed analyzing the data using categorical aggregation where the researcher codes data and collects instances from which meanings will emerge. Using in vivo strengthened this approach.

Specifically, 10 steps were completed to thoroughly analyze the data:

1. Developed a coding scheme based on the philosophical framework, the research questions, and the goals of the lessons.

2. Read all pre-questionnaire responses and categorized them by both types of anxiety producing situations and types of responses.

3. Read all journal entries two times for each week and wrote 10 weekly memos capturing the main ideas seen in each data set.
4. Did open-coding (in vivo) of 20-40 randomly selected entries each week, starting with 20 and adding 5 each time until there were no new categories of ideas emerging.

5. Summarized the themes/subthemes from the fully analyzed entries each week.

6. At the end of the 10 sessions, cross-analyzed the 10 memos for reoccurring and unique themes.

7. At the end of 10 sessions, cross-analyzed the themes and subthemes from the 10 sessions of randomly sampled journal entries.

8. Analyzed 10 weeks of observations for evidence of engagement and reactions to the anxiety-reducing strategies.

9. Cross-analyzed all themes and subthemes from weekly journals and observations.

10. Analyzed pre-questionnaire responses and post-questionnaire responses.

Data Management

A system of color coding of notes to help keep track of dates, times, names, attendance, and descriptions of settings (Marshall & Rossman, 2006) was employed in data management. Due to the overwhelming amount of data collected, using words, stories, or sentences that conjured up a memory or feeling assisted in finding and keeping the intended meaning. The data were carefully protected, kept both in handwritten notes and typed into a database on a computer. When the data collection was complete, data were stored in a locked room in a locked file cabinet at the office of Dr. Patricia Reeves on the campus of Western Michigan University.
Validity

For this study, three separate strategies were used to check for validity. The first was triangulation. Triangulation is defined by Marshall and Rossman (2006) as bringing more than one source of data to bear on a single point. Using different methods of gathering data to compare different approaches to the same thing provided clearer evidence and built justification for the themes (McMillan, 2008). Field notes, observations (both those of the investigator and the co-teachers of the class), and journal entries were used to triangulate the data.

Another method to check for validity was peer debriefing (Creswell, 2003, p. 196). This involved asking a peer to examine evidence and ask questions about the study so it made sense to other readers of the study. The third method that was utilized was rich, thick descriptions to accurately portray the findings (p. 196). This method of validity worked well to bring the reader into the setting and the experiences of the participants.

Delimitations

Parameters were set up to establish the boundaries and exceptions. One of the parameters was the delimitations of the study (Creswell, 2003). In this particular county, there were significant differences between the other school districts and the district of this study in the percentages of students with a formal diagnosis of anxiety documented on Section 504 plans. Section 504 plans provide school accommodations for students who have an impairment, such as anxiety, and the impairment impacts their ability to access the learning like their peers. This school district has an exceptional high percentage of their student population with current diagnoses or anxiety without a formal diagnosis.
This may be due to the educational level of one or both parents or financial capability to seek treatment for diagnosis. Though the research supported the benefits of anxiety-reducing strategies, such as progressive muscle relaxation and deep breathing, for all students, if the numbers of confirmed cases are low in their districts (few 504s for students with anxiety), this study may not be of interest to other school districts.

**Chapter III Summary**

In summary, this action research case study with a phenomenological approach attempted to understand the experiences of sixth grade students participating in anxiety-reducing strategies in their classroom. Semistructured, open-ended journal writing with semistructured questions and prompts were used allowing for themes and patterns to emerge and deepen the understanding of these participants’ experiences with this phenomenon. Additionally, from observations of the entire process, this study hoped to show evidence through the spoken word of the locus of control moving from the adult to the child to gain control over their responses to anxious situations.
CHAPTER IV

RESULTS

The purpose of this chapter is to report the findings of this study, which used action research methodology to explore how students in a sixth grade class experienced and responded to anxiety prior to, during, and after receiving instruction in anxiety-reducing strategies that are embedded in the classroom. Data were collected through journals the students kept, pre- and post-questionnaires, observation notes, and field notes. This chapter will (a) describe the sample selection, (b) describe the data collection methods and procedures, and (c) review the findings from the study.

Sample Selection

One hundred fifty-four sixth grade students were taught anxiety-reducing strategies embedded in their Information Literacy class. Another 159 sixth grade students served as the control group, taking the same Information Literacy class taught by another teacher. The study began right after the winter break with the intent to last for 5 weeks with two sessions a week. There were 6 snow days during that period, causing the study to extend to 6 weeks with 2 weeks having just one session.

The anxiety-reducing strategies were designed to be part of the curriculum so all students in the experimental group participated in the program. The experimental group was made up of 67 girls and 84 boys, ages 11–13. Though 91% of the students were Caucasian, the sample was also comprised of 1% African Americans, 4% Hispanics, 1% Native American, and 3% multiracial. The control group participated in the pre- and
post-questionnaire. Demographics for the control group, though similar to the experimental group, were not reported.

**Description of the Data**

The analysis steps used for this study followed the guidelines by Marshall and Rossman (2006) and involved seven steps:

- Organizing data
- Immersion in the data (observations, field notes, weekly journal entries)
- Generating categories and themes
- Coding the data
- Offering interpretations through analytic memos
- Searching for alternative understandings
- Writing the report to present the study.

In vivo coding was used, giving exact words of the participants to the names of the categories or themes. The typologies (Richards, 2009) were generated from both common sense and the research objectives. A coding scheme based on the philosophical framework, the research questions, and the goals of the lessons was developed. The coding scheme consisted of five categories or typologies: (a) how anxiety was experienced, (b) anxiety-producing situations, (c) student response to the anxiety-producing situations, (d) student response to anxiety lessons, and (e) student projected future use of anxiety-reducing strategies. Table 1 summarizes the data analysis lens the study was examined through.

The pre-questionnaire responses were read and categorized by types of anxiety-producing situations and types of responses. All the journal entries were read two times
for each week, and 10 weekly memos were written capturing the main ideas seen in each data set. Open-coding (in vivo) was done on 20–40 randomly selected entries each week, starting with 20 and adding 5 each time until there were no new categories of ideas emerging. Each week, the themes and subthemes from the fully analyzed entries were summarized. Data records were created at each step using NVivo 10 software.

Table 1

*Data Analysis Lens*

<table>
<thead>
<tr>
<th>Research questions</th>
<th>Anxiety</th>
<th>Data source</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>How experienced</td>
<td>Response to situations</td>
</tr>
<tr>
<td><strong>Feelings and behaviors with anxiety before strategies</strong></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Journals</td>
<td></td>
</tr>
<tr>
<td><strong>Engagement and response to instruction during lessons</strong></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Observations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Field notes</td>
<td></td>
</tr>
<tr>
<td><strong>At conclusion, assessment of experiences with strategies and future use</strong></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Observations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Field notes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post-questionnaire</td>
<td></td>
</tr>
<tr>
<td><strong>Comparison of experimental and control group to how they respond to anxiety</strong></td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

*Note.* X denotes the intersection between the research questions, data source, and issues from anxiety.

The 10 memos were cross-analyzed for reoccurring and unique themes at the end of the 10 sessions. The themes and subthemes from the 10 sessions of 75 randomly
selected journal entries were also cross-analyzed. After rereading all of the observation notes from the 10 sessions, evidence of engagement and reactions to the anxiety-reducing strategies were recorded on memos. All the themes and subthemes from the weekly journals and the observations were cross-analyzed. Finally, the pre-questionnaire responses and the post-questionnaire responses were analyzed, looking for themes and categories.

Memos were written to record my thoughts and insights during this intuitive and emergent data analysis process. The data were interpreted and reinterpreted through the process to find significance and meaning in the students’ experiences and responses to their anxiety before, during, and after the anxiety-reducing strategies instruction.

**Findings**

Throughout the interactions with the sixth grade students, a story was beginning to emerge that would enable readers to make a connection with these students as they learn to handle anxious situations in school. Richards (2009) made a distinction between “writing up” a report of findings and “telling” what is going on through the findings. Telling the story of these students as they learn and respond to anxiety-reducing strategies provides the reader with a rich story of emotions, behaviors, and growth.

**Research Question 1**

*How do sixth grade students describe their feelings and behaviors with anxiety before the anxiety-reducing strategies?*

Both the experimental group and the control group were given a three-item questionnaire one week before the study began (see Appendix I). The first question asked was, “When in the last two weeks have you felt anxious?” The students’ shared
multiple situations that caused anxiety, many of them social situations. The most common situations that caused anxiety for students in the control group were tests and quizzes (48 responses) and public speaking (23 responses). Public speaking did not draw any responses from the experimental group, but tests and quizzes were common anxiety-producing situations for 12 students. The most common response in the experimental group was “I don’t have anxiety,” with 31 responses. Only the experimental group had categories for “I don’t know/understand” with 14 responses, and “Misunderstood excitement for anxiety” with 15 responses. Both groups had a category of “other” for responses such as, “before I got braces” or “when the power went out before break.” Table 2 provides a summary of the responses to the pre-questionnaire question on anxiety-producing situations by both the experimental group and the control group.

Many of the control group students responded that they would use some form of the three anxiety-reducing strategies in this study when asked what they do when they feel anxious in school. Their most common response was to tell themselves they could do it (positive self-talk), at 43 responses. Deep breathing was used by 20 of the control group to help control their anxiety. Thirty of the students responded that they would just relax and calm down. It was unclear what actions they would take to calm themselves down and relax. The remaining answers ranged from “just do it” to “go talk to a friend, teacher, or parent.” An “other” category was created for the singular responses that did not fit into any other category, such as “I twirl my hair” or “I look at the clock.”
Table 2

*Pre-Questionnaire Experimental and Control Groups on Anxiety-Producing Situations*

<table>
<thead>
<tr>
<th>Situations</th>
<th>Experimental group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tests and quizzes</td>
<td>12</td>
<td>48</td>
</tr>
<tr>
<td>Projects</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Public speaking</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td>Social</td>
<td>5</td>
<td>17</td>
</tr>
<tr>
<td>Homework</td>
<td>9</td>
<td>13</td>
</tr>
<tr>
<td>Grades</td>
<td>11</td>
<td>18</td>
</tr>
<tr>
<td>Something new</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Sports</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Band</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Family issues</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Don’t know/understand</td>
<td>14</td>
<td>0</td>
</tr>
<tr>
<td>Misunderstood excitement for anxiety</td>
<td>15</td>
<td>0</td>
</tr>
<tr>
<td>Don’t have anxiety</td>
<td>31</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>15</td>
<td>10</td>
</tr>
</tbody>
</table>

The most common response from the experimental group when asked what they did when they got anxious in school was “I don’t know” or “I don’t understand.” “Relax and stay calm” was also a common response to handling anxiety. Nine students said they did not have anxiety at all, and another 19 interchanged excitement for anxiety. Table 3 provides a summary of the responses to the pre-questionnaire question on responses to anxiety-producing situations by both the experimental group and the control group. It was interesting how different the responses of the experimental group were to the control group. One possible reason may be that the teacher of the control group was reassigned to teach this class due to budget cuts after over 20 years as a media specialist, though this
was not investigated thoroughly. The veteran teacher may have been assigned more of
the at-risk students due to her experience.

Table 3

Pre-Questionnaire Experimental and Control Groups Responses to
Anxiety-Producing Situations

<table>
<thead>
<tr>
<th>Responses</th>
<th>Experimental group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ignore it</td>
<td>17</td>
<td>12</td>
</tr>
<tr>
<td>Do something else/forget it</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>Positive self-talk</td>
<td>12</td>
<td>43</td>
</tr>
<tr>
<td>Breathing exercises</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>Progressive muscle relaxation</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Relax, stay calm</td>
<td>23</td>
<td>30</td>
</tr>
<tr>
<td>Go to friends for help</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Talk to someone (parent, teacher)</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Work harder, study more</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Just do it</td>
<td>13</td>
<td>30</td>
</tr>
<tr>
<td>I don’t know/understand</td>
<td>24</td>
<td>0</td>
</tr>
<tr>
<td>I don’t have anxiety</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>17</td>
<td>38</td>
</tr>
</tbody>
</table>

For the treatment group, teachers wrote the Merriam-Webster Dictionary (Mish,
1994) definitions of the words anxiety and excitement on the white board at the back of
the room to help the students differentiate between the two words for this study.

Examples of each were given until the students were able to differentiate between the two
mental and emotional states. “It is almost Christmas break. I am so ____________.”

“Today, we get to play my favorite game in gym class. I am ____________.” “I have
a hard test next hour in math class. I am a little nervous. I am ____________.” “I am ____________ because I have to give my presentation in class today.” This exercise cleared up the misinterpretation. Though this was not planned in the original design, when doing a qualitative study, it was important to be flexible and listen to the needs and responses of the participants and adjust accordingly.

After the introductory discussion for the treatment group of students, to further deepen students’ understanding of anxiety, the first journal prompt was “What does your body do when you get anxious?” This prompt brought out responses, such as, “My hands get sweaty. I get really hot and I might start to shake a little” and “I tend to tap my pen or pencil, or shake my leg.” Another student responded that she “[tries] to close up and hide myself. I sometimes get headaches or stomachaches. I feel like my face gets blotchy.”

Figure 2 and Figure 3 show students’ response to what their bodies do when they feel anxious.

1. I know that anxiety is feeling queezy and uncomfortable. Here’s a picture of it.

2. I will usually sweat a little bit and sometimes get goosebumps.

*Figure 2. Student’s response to what his body does when he is anxious.*
Spontaneous conversation. Ongoing spontaneous conversation took place between the sixth grade students during session one, after the introduction letter was read. The students freely shared what their bodies or minds went through when anxious in school in the first journal. Comments such as, “Don’t you just hate it when your palms get all sweaty?” or “I feel like I am the only one who feels like all nervous-like before a test and now I know I am not alone,” and “I know, I know, my heart just starts beating like crazy right before I have to give a speech! I feel like I am going to have a heart attack!” illustrate the ways students shared their physical reactions to feeling anxious. Students laughed, but there was a sense of commonality among the groups.

Conclusion to Research Question 1. After analyzing this category, it became apparent that sixth grade students experience anxiety in school. The situations change from when they were younger, but the feelings are real. The students who shared that they experienced anxiety said that they do not like how it felt. There were misunderstandings of just what anxiety was and what to do about it. Students were very open with not only their responses, but their willingness to learn how to handle this
phenomena called anxiety, as was evident in the comment, “I’d like to learn to deal with these feelings better so I can do better in school. I have plans and need good grades!”

**Research Question 2**

*How do sixth grade students engage with and respond to the instructions on anxiety-reducing strategies during anxiety-reducing lessons?*

**Experiences and responses to early sessions.** The students in the experimental group were introduced to progressive muscle relaxation and deep breathing during their second session. The co-investigator sat on a stool in the front of the room and modeled the sitting position as directed on the CD. The relaxation exercises concentrated on hands and arms. The students all matched their sitting position to the co-investigator’s. There was some looking around for confirmation from their peers and a few giggles when the CD directed them to “flex their biceps” and “smile slightly,” but there was 100% participation for this session.

**Progressive muscle relaxation.** The students wrote in their journal reflecting on what they just learned after receiving instruction on the strategies. The responses were 92% positive about the two strategies. One comment was, “In the PMR session, I felt a calming relaxation of the breathing and was able to calm and clear my mind. That’s saying a lot because I usually have a lot of tension in my mind and body.” Another shared about her gratitude for a strategy that she could use to make this coming weekend go a bit smoother. “Today I experienced some relaxation exercises that I can use on weekends and stuff. It is good timing too because this weekend I am switching houses which means different people . . . scary.” There were also negative responses, such as “This is boring. I don’t like it. It doesn’t work at all” and “I would not do these . . .
people would see and laugh.” A few students revealed through their journals that they have special needs and that was why the strategies did not work for them. “I can’t focus on them because I have ADHD.” A lengthy comment came from a girl who shared she had severe anxiety. She said:

Well, in my opinion, the PMR and deep breathing DID NOT help. I forced it not to work, but that’s just not something I would do on my own. The way I think of this is fighting fire (anxiety) with grass (physical relief). I think you should fight fire with fire. Mental pain with mental relief. If you fight fire with grass, you will get burned. When I focus on my breathing during these times, I just mess up my breathing so I’ll have shallow breaths AND I’ll be anxious. In my opinion you should either have a stress ball or something or you should use your mind, your mind is key. Use your imagination, just think, relax. That’s all you have to do.

To begin to build a relationship with her, the investigator responded in her journal thanking her for her honesty and asking to learn more from her on how to help others handle their anxiety. This correspondence was the beginning of a good working and learning relationship between the student and the investigator. This student’s responses were specifically followed throughout this study and her growth was reported. This student was named Jude for the purpose of this report.

*Breathing exercises.* The two breathing strategies taught during session two and session three were deep breathing and natural breathing. Session four introduced a new breathing technique called Energized Breathing. Students needed to stand so they were able to move their arms like windmills backwards and forwards without hitting anyone or anything. The benefits of the breathing technique were shared with the class before
starting this breathing technique. The co-investigator stood in the front of the room and modeled the best position for this technique. The CD provided instructions for the breathing exercise. This was a fun technique and the students giggled throughout the exercise as they followed along.

The fluorescent lights were on for this exercise for the first session. The students asked to turn off one of the lights to provide a more relaxing setting by the second session and to keep the lights off for the remainder of the sessions. Light from the windows provided enough to see all the students during the exercises. Lights were turned back on for the positive self-talk and when the students wrote in their journals. During these early sessions, students recorded their experiences in their journals. One student who self-disclosed that she had an anxiety disorder shared, “It was surprisingly comforting. Mostly because I have an anxiety disorder and can hardly stay calm. I always feel over-worked and uncomfortable, but it helped a little.” Another wrote, “The breathing exercises made me feel relaxed. I yawned a little but it made me feel good.” Some students shared that they have used breathing before athletic or dance events. “I knew the deep breathing would relax me because I do that every day at dance (we do it as a class).” Another shared, “When I started deep breathing, it helped a lot. I am a very tense person but I do that a lot, just breathe when I get really tense.” No one wrote that they did not like the breathing exercises in the early stages of the study. The majority of the students closed their eyes during the breathing exercises. Four to seven students in each class left their eyes open. Only two or three students in each class did not participate fully. They looked around or became distracted by things around the room or on their bodies (i.e., bracelets, rings, sleeve cuffs).
**Positive self-talk.** Positive self-talk was not introduced until the fourth session. The investigator read the positive self-talk script (see Appendix C) to introduce this strategy. Spontaneous discussion took place between the students about the power of self-talk and how they had heard the Olympic athletes have used this technique before their events. Several of the students mentioned they also have used it before gymnastics or soccer. One student mentioned that he wrote a positive phrase on the top of each test he takes to help him do better. The co-investigator read the 12 self-talk phrases after the discussion, and the students were given the options to repeat the phrases with the co-investigator, read them quietly to themselves, or close their eyes and visualize the phrases. The journal for this activity had two parts: (a) to write or draw their thoughts and feelings about their first experience with positive self-talk, and (b) to review the list of 12 phrases and circle two or three phrases that they each like best. Several students liked the strategy and adopted one or two of the phrases right away. Student 3.3 shared his favorite: “‘I am strong and capable.’ That is the one that will work best for me.”

At this early stage, 34 students responded that they had their own phrases and that the 12 new phrases did not exactly fit them. “I don’t really say these exactly but things like that. But I know it works.” Another student shared, “Positive thinking is good for boosting self-esteem or to help feel like you can do this. I don’t really tell myself any of these phrases though.” There were also a few responses that were more negative about this strategy, such as, “It’s new to me but I don’t think it will work” or “It is stupid. I do not fit these.” These phrases called for a thorough analysis to see why there was such a strong response at such an early stage of learning.
Overall, the response to positive self-talk and its value was positive, but the learning of new phrases to add to their toolbox or replace negative thoughts was not as well accepted during the early sessions.

**Concluding thoughts of the early sessions.** Reviewing Kondo and Ying-Ling’s 1994 study on anxiety uncovered similarities in how participants in the 1994 study handled anxiety in comparison to some sixth grade students. In this initial phase, the students were beginning to fall into four groups: (a) those who loved the strategies and learning something new, (b) those who did not like them from the start, (c) those who felt the strategies did not work for them, and (d) those that did not need these strategies. The students who made early determinations about not needing or liking the strategies seemed to fit Kondo and Ying-Ling’s categories of resignation and disaffiliation. Resignation was when participants were unwilling to do anything about their anxiety. Disaffiliation was when there was little to no participation from the student, and when the student often left the situation or avoided it all together. During session three, three students ask to use the restroom in the middle of the session, and another was absent for both session two and four. This behavior was recorded for further analysis.

**Experiences and responses to the middle sessions.** The middle sessions were comprised of sessions five, six, and seven. The school district experienced 6 snow days, so there were 2 weeks when only one session was offered versus the design of two a week. Many of the students, when they returned to school, shared experiences of anxiety while riding on the slippery roads. They shared how they had tried the deep breathing and positive self-talk to help decrease their anxiety. “I felt a little anxious heading down the highway, so I decided to do deep breathing while we got away from semis.”
**Progressive muscle relaxation.** Session five started with journaling. On the white board in the back of the room, the investigator provided a prompt, “Have you used the progressive muscle relaxation exercises you have learned so far? If not, have there been times in school when you could have used them?” A random selection of responses was grouped by commonality in order to look for and strengthen emerging themes. Table 4 illustrates the themes emerging from the data generated from the muscle relaxation exercises.

These responses represent all of the categories of responses. After session five, 86 of the 154 students believed there was value in progressive muscle relaxation. After sessions six and seven, this positive response moved up to 92 of the 154 students. Figure 4 was drawn by a student to complement his writing about how relaxed progressive muscle relaxation made him. He said the relaxation CD made him feel very relaxed and at ease. He would like to do these exercises every day during school and at home.

Session six offered great data on the pros and cons of progressive muscle relaxation for the students. The students participated in a full body exercise that took 21 minutes and 49 seconds. The students had five sessions of progressive muscle relaxation at this point so were very familiar with the stretches in each body section. This longer session was difficult for the students who shared in their journals that they had trouble focusing. Students who have demonstrated difficulty in sitting for a long time also struggled: “It was too long and I feel like I can’t sit still for very long.”
Table 4

_Students’ Responses to Progressive Muscle Relaxation Exercises_

<table>
<thead>
<tr>
<th>Student</th>
<th>Sample of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emerging Theme – I like it.</strong></td>
<td></td>
</tr>
<tr>
<td>Student 3.2</td>
<td>“I have used PMR since we learned it but the reason I have used it is because I have anxiety.”</td>
</tr>
<tr>
<td>Student 2.32</td>
<td>“I have used PMR because I am in lots of stress.”</td>
</tr>
<tr>
<td>Student 2.17</td>
<td>“I have used PMR before a soccer game when my coach was mad.”</td>
</tr>
<tr>
<td>Student 4.11</td>
<td>“Yes, I used it before a test.”</td>
</tr>
<tr>
<td>Student 5.21</td>
<td>“Well, I used PMR during gymnastics. I used it when I was getting tense about what I was going to do in that time period. I was doing bars and having trouble so I used it!”</td>
</tr>
<tr>
<td>Student 2.19</td>
<td>“I used it right before I performed my solo at Lawton performance. I also used it before my social studies and math test.”</td>
</tr>
<tr>
<td>Student 5.12</td>
<td>“I felt good. I love it! It makes me feel relaxed and refreshed. I was just about to fall asleep. I just wish that we were allowed to lay down. I would have fallen asleep.”</td>
</tr>
<tr>
<td><strong>Emerging Theme – I don't like it.</strong></td>
<td></td>
</tr>
<tr>
<td>Student 2.12</td>
<td>“No, because it is for younger kids.”</td>
</tr>
<tr>
<td>Student 3.21</td>
<td>“I have not used them because I don’t like using them.”</td>
</tr>
<tr>
<td>Student 3.6</td>
<td>“No, because it boring.”</td>
</tr>
<tr>
<td>Student 4.9</td>
<td>“This is boring. I don’t like it. It doesn’t work at all.”</td>
</tr>
<tr>
<td>Student 5.2</td>
<td>“All it did was make me tired instead of relaxed and it was so boring. I almost fell asleep in the middle of the thing.”</td>
</tr>
<tr>
<td><strong>Emerging Theme – It doesn’t work for me.</strong></td>
<td></td>
</tr>
<tr>
<td>Student 4.2</td>
<td>“No, tests, I don’t feel any different.”</td>
</tr>
<tr>
<td>Student 5.17</td>
<td>“I have not used it because it doesn’t work for me and I never need to.”</td>
</tr>
<tr>
<td>Student 4.5</td>
<td>“It does not work.”</td>
</tr>
<tr>
<td>Student 2.1</td>
<td>“The PMR is not really something I would use. It takes too long to relax.”</td>
</tr>
<tr>
<td>Student 4.4</td>
<td>“It made me yawn a lot because I was breathing shallowly I think. But it doesn’t really have an effect on me/didn’t make me feel relaxed.”</td>
</tr>
</tbody>
</table>
There was a mix of reactions, from “It doesn’t work because I am not relaxed. I am never relaxed. It might work for everybody else but not me,” to “I like it a lot. I think it will help in future situations.”

There were two instances when the investigator stood between a small group of boys to help them remain quiet for the rest of the group. Although not part of the research questions, if there was any issue of class disturbances during the exercises, it involved small groups of boys. There were two to three boys sitting together who had a difficult time participating fully in the exercises in three of the five classes.

The Dean came into the classroom during third hour and watched the class do their relaxation exercises. She mentioned she had a sore back and neck. The teacher stood up and asked the class if they had any ideas of how to help her with her sore back and neck. Instantly, students started to share different muscle exercises that they had learned that targeted those areas. The students asked her to do the exercises with them so they could make sure she was doing them right. The journal prompt was changed to ask the students how they felt about their ability to help others who were anxious or sore due
to stress in their day. The students shared through their journals that they had been helping family members with their anxiety by sharing some of the anxiety-reducing strategies with them.

“I helped my dad not to be so anxious about stuff by using the tools I learned.” A student in fourth hour wrote in her journal that day, “I’ve been teaching my mom as we go along. She is really anxious over everything.”

Jude shared her response to the PMR in her session five journal: “I’m not really sure if I used PMR or not. I sort of did the clenching your fist part. My mom taught me PMR in a different way when I try to sleep at night.” By the seventh session, Jude’s response was more positive about the PMR exercises: “I think that really works. After the tape, I was so deeply relaxed. In this meditation, I see how a person really focuses on the pain and how lose [sic] your body feels.”

**Breathing exercises.** Session five started with learning a breathing technique called Alternative Breathing, where students were taught to hold one nostril closed to breathe in the other and then hold the other nostril shut to exhale. The technique provided a quick calming as well as help with headaches. All of the lights were shut off for this exercise to provide as much privacy as possible since this age group tends to be so concerned about what others think and the potential of looking silly to their peers. Students were told the investigator would be walking around during the exercises to assist and observe their engagement. The journal prompt was, “Have you used any of the breathing exercises so far? If so, which breathing exercise technique did you use? If not, has there been a time in school when these breathing exercises would have helped?” A random selection of responses was grouped by commonality to continue to look for and
strengthen possible themes. Table 5 illustrates how the patterns in the data from the journal data continued to reinforce the emergent themes.

Jude’s response to the prompt was: “I don’t use breathing exercises because when I do, I have a tendency to mess up my breathing and I will breathe in too short or too long and start having a hard time breathing.”

Students often chose to draw their response instead of writing about it. Figure 5 depicts a student’s journal response to the breathing exercises.

Breathing exercises were not done for session six since the class did a full 22-minute PMR exercise. During session seven, the students practiced deep breathing and complete natural breathing, two previously taught breathing exercises. They did not journal about this experience. It was very quiet in all five classes during the breathing exercises. There was not one student who exhaled loudly to make his peers laugh. It was a cloudy day out and the lights were dim. For the previous week and a half, the science classes took a field trip to the Challenger, so the Information Literacy classes were made up of different students each hour to accommodate the science classes. Session seven was the first day all the classes were back on their routine schedule. Everyone seemed calm and relaxed. The breathing exercises were completed in total silence and when they were over, the balance of the time in class was quiet and productive. The teacher shared her appreciation for this opportunity to teach without distractions or behavioral issues.
Table 5

*Students’ Responses to Using the Breathing Technique on Their Own*

<table>
<thead>
<tr>
<th>Student</th>
<th>Sample of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emerging Theme – <em>I like it.</em></strong></td>
<td></td>
</tr>
<tr>
<td>Student 2.7</td>
<td>“Yes, deep breathing because it calms me down and puts me in a zen feeling.”</td>
</tr>
<tr>
<td>Student 3.14</td>
<td>“I have used deep breathing when using the robot at the Challenger because I was annoyed with it.”</td>
</tr>
<tr>
<td>Student 4.18</td>
<td>“One of them because of the geography bee. I used deep breathing.”</td>
</tr>
<tr>
<td>Student 3.20</td>
<td>“I’ve used the perfect breathing. I use it because it calms me down.”</td>
</tr>
<tr>
<td>Student 3.29</td>
<td>“I do some of the breathing exercises before I get on an event in gymnastics!”</td>
</tr>
<tr>
<td>Student 4.15</td>
<td>“I have not but I cannot wait to use them.”</td>
</tr>
<tr>
<td><strong>Emerging Theme – <em>I don’t need it.</em></strong></td>
<td></td>
</tr>
<tr>
<td>Student 2.27</td>
<td>“Not one of these ones, I breathe with a technique without a name, for every breath, I say a word in my head. It calms me.”</td>
</tr>
<tr>
<td>Student 2.28</td>
<td>“No, I haven’t used any yet because I haven’t needed them but when I do, I have something that work for me.”</td>
</tr>
<tr>
<td>Student 3.28</td>
<td>“No, I do not need them.”</td>
</tr>
<tr>
<td>Student 2.0</td>
<td>“No, I didn’t need to.”</td>
</tr>
<tr>
<td><strong>Emerging Theme – <em>I don’t like them.</em></strong></td>
<td></td>
</tr>
<tr>
<td>Student 5.4</td>
<td>“No, I have not used any of the breathing techniques yet.”</td>
</tr>
<tr>
<td>Student 2.2</td>
<td>“I have not used any of the breathing so far. I never think to use them.”</td>
</tr>
<tr>
<td>Student 3.13</td>
<td>“No, I don’t like them.”</td>
</tr>
<tr>
<td><strong>Emerging Theme – <em>It doesn’t work for me.</em></strong></td>
<td></td>
</tr>
<tr>
<td>Student 4.16</td>
<td>“No, it does not work.”</td>
</tr>
<tr>
<td>Student 2.12</td>
<td>“I haven’t really used the breathing techniques. I guess they just don’t work as much for me as the other techniques.”</td>
</tr>
</tbody>
</table>
Figure 5. Student’s response to the breathing exercises.

**Positive self-talk.** The main focus of the middle sessions for positive self-talk was to increase their mastery of the 12 given phrases and their own, along with repeatedly articulating the value and use of this strategy. The students listened to the phrases, repeated the phrases, visualized the phrases in their minds, and wrote as many of the phrases as they could by memory, both with a partner and independently during these sessions. The journal writings for the PST asked if they had tried any of the PST any time over the last week or so to help reduce their anxiety. A random selection of responses was grouped by commonality to continue to look for and strengthen reoccurring themes. Table 6 illustrates how the responses from this data set reinforced the emergent themes.
Table 6

*Students’ Responses to Positive Self-Talk*

<table>
<thead>
<tr>
<th>Student</th>
<th>Sample of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emerging Theme – I like it.</strong></td>
<td></td>
</tr>
<tr>
<td>Student 2.26</td>
<td>“I have tried a couple phrases to boost my self-confidence.”</td>
</tr>
<tr>
<td>Student 4.1</td>
<td>“I think that I might try to try some of these self-talk strategies. I like them because they make me feel like I can do anything.”</td>
</tr>
<tr>
<td>Student 3.23</td>
<td>“This time, I have used them. I used, ‘I am calm, positive, confident, and self-assured.’ When we had a concert for the band I also used it and when I had to get up front of the class in communications for life. I have a pretty bad stage fright.”</td>
</tr>
<tr>
<td>Student 3.24</td>
<td>“I am a dancer and we do very hard things and I have to force myself down into splits and stuff like that. I have to tell myself I am capable of doing that. I am strong enough to do that.”</td>
</tr>
<tr>
<td>Student 2.7</td>
<td>“I use the self-talk, not very frequently. I use it when someone is mean mostly, and that doesn’t happen very much to me.”</td>
</tr>
<tr>
<td>Student 4.17</td>
<td>“I have tried to replace negative thoughts with positive thoughts.”</td>
</tr>
<tr>
<td>Student 4.18</td>
<td>“I always use positive self-talk.”</td>
</tr>
<tr>
<td>Student 5.3</td>
<td>“I’ve never used it before. It is new but I like it . . . I will say I am strong and capable.”</td>
</tr>
<tr>
<td><strong>Emerging Theme – I don’t need them.</strong></td>
<td></td>
</tr>
<tr>
<td>Student 4.14</td>
<td>“I use my own all the time. They are really easy and fast to use.”</td>
</tr>
<tr>
<td>Student 3.17</td>
<td>“I have used my own positive self-talk because it helps me when I am feeling down.”</td>
</tr>
<tr>
<td><strong>Emerging Theme – I don’t like it.</strong></td>
<td></td>
</tr>
<tr>
<td>Student 2.20</td>
<td>“I hope we don’t have to do these next year.”</td>
</tr>
<tr>
<td>Student 2.29</td>
<td>“I don’t talk to myself.”</td>
</tr>
<tr>
<td>Student 3.3</td>
<td>“I really don’t like self-talk because it just makes it seem like if I did self-talk, then I give in to having more anxiety or a panic attack.”</td>
</tr>
</tbody>
</table>
### Table 6—Continued

<table>
<thead>
<tr>
<th>Student</th>
<th>Sample of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emerging Theme – It doesn’t work for me.</strong></td>
<td></td>
</tr>
<tr>
<td>Student 4.26</td>
<td>“I feel the same when I have a quiz or something like that because it doesn’t work for me.”</td>
</tr>
<tr>
<td>Student 3.0</td>
<td>“These strategies don’t work for me. I don’t know why, they just don’t.”</td>
</tr>
<tr>
<td>Student 3.11</td>
<td>“The strategies don’t work for me.”</td>
</tr>
<tr>
<td>Student 2.24</td>
<td>“I think it works but I really think it is not for me. I have tried before but it never really worked.”</td>
</tr>
<tr>
<td>Student 2.8</td>
<td>“It’s new to me but I don’t think it will work.”</td>
</tr>
</tbody>
</table>

Jude’s response to the PST was:

I think I would use these phrases a lot in different places. When I was at the Challenger, I was really nervous because my voice was on the loud speaker. I used positive self-talk and a bit of deep breathing and it worked! I also like to think, if someone judges me or makes mean comments, I now have the power to ignore it and I have the power to withstand temptation and show them my power without lifting a single finger.

Positive self-talk provided the strategy that was most natural to these students. By the seventh session, 111 out of 154 students responded favorably to using these when in anxious situations in school.

**Concluding thoughts on the middle sessions.** The PST, over the PMR and breathing exercises, was observed to be more comfortable for the students through continual analysis and reflection of the responses and observations of the students as they participated in these anxiety-reducing strategies. Second hour shared that before learning
the self-talk, it was their peers that provided this positive talk versus doing the PST to themselves, and for themselves.

**Experiences and responses of the later sessions.** The later sessions consisted of sessions eight, nine, and ten. The students were familiar with all of the progressive muscle relaxation groups, all four breathing techniques, and all of the 12 positive self-talk phrases enough to recite at least 9 out of the 12 by memory (as evident in the journal prompt for session seven). There was a sense of community when the investigator walked in the room. Students greeted her by name, asked what they were doing in that day’s session, and shared personal stories of what happened to them since the last session. Session eight was comprised of two progressive relaxation exercises (upper body) and two breathing exercises (energizing breathing and alternative breathing). During session nine, the students learned a 2-minute total body relaxation exercise, practiced all four breathing techniques without the CD, and practiced positive self-talk.

**Positive self-talk.** The students wrote about two or three of the positive self-talk phrases they felt fit them, along with one or two of their own that they could commit to using when in anxious situations. The positive self-talk phrase chosen the most was, “I am strong and capable.” This also was the first phrase in the sheet of 12 phrases. One hundred percent of the students participated in this journal with just one student saying that he did not have a phrase of his own but liked 2 of the 12 he learned. Table 7 shows the positive self-talk phrases chosen by students as phrases they would use when in an anxiety-producing situations in school.
Table 7

**Favorite Positive Self-Talk Phrases Chosen by Students**

<table>
<thead>
<tr>
<th>Sample of Responses</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>A panic attack will not hurt me.</td>
<td>24</td>
</tr>
<tr>
<td>I no longer accept negative thinking as part of who I am.</td>
<td>2</td>
</tr>
<tr>
<td>When I notice negative thoughts coming into my mind, I quickly replace them with truthful, positive thoughts.</td>
<td>2</td>
</tr>
<tr>
<td>I am strong and capable.</td>
<td>27</td>
</tr>
<tr>
<td>I am in control of myself and the thoughts and choices I want to make.</td>
<td>9</td>
</tr>
<tr>
<td>I am allowed to be me without apology, guilt or shame.</td>
<td>5</td>
</tr>
<tr>
<td>I am proud of myself and my accomplishments, no matter how small.</td>
<td>4</td>
</tr>
<tr>
<td>I am calm, positive, confident and self-assured.</td>
<td>3</td>
</tr>
<tr>
<td>I am confident and I am getting stronger every day.</td>
<td>4</td>
</tr>
<tr>
<td>I am okay and doing well. I am healthy and strong.</td>
<td>6</td>
</tr>
<tr>
<td>I have the power to control the thoughts I want to think. If I don’t like my thoughts, I can change them.</td>
<td>8</td>
</tr>
<tr>
<td>I choose thoughts that are encouraging and helpful to me.</td>
<td>8</td>
</tr>
<tr>
<td>I was born a champion.*</td>
<td>1</td>
</tr>
<tr>
<td>I usually ask God for help.*</td>
<td>1</td>
</tr>
<tr>
<td>I can do this.*</td>
<td>11</td>
</tr>
<tr>
<td>I will be okay.*</td>
<td>1</td>
</tr>
<tr>
<td>Nothing can hurt me. I am bullet-proof.*</td>
<td>1</td>
</tr>
<tr>
<td>Sticks and stones may break my bones but words will never hurt.*</td>
<td>1</td>
</tr>
<tr>
<td>Nobody can change my thoughts.*</td>
<td>1</td>
</tr>
<tr>
<td>I can be me.*</td>
<td>1</td>
</tr>
<tr>
<td>Don’t let them put you down.*</td>
<td>1</td>
</tr>
</tbody>
</table>
Table 7—Continued

<table>
<thead>
<tr>
<th>Sample of Responses</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don’t struggle to be yourself.*</td>
<td>1</td>
</tr>
<tr>
<td>I am amazing no matter what anyone thinks about me.*</td>
<td>1</td>
</tr>
<tr>
<td>I am normal.*</td>
<td>1</td>
</tr>
<tr>
<td>3:2, bases loaded, no big deal.*</td>
<td>1</td>
</tr>
<tr>
<td>Positive thoughts always.*</td>
<td>1</td>
</tr>
<tr>
<td>I don’t have one of my own.*</td>
<td>1</td>
</tr>
</tbody>
</table>

*Note. Phrases with an asterisk (*) are students’ own phrases.

Jude’s favorite self-talk phrases were “If I don’t like my thoughts, I can quickly replace them with positive ones” and “I no longer accept negative thinking as a part of who I am.” The co-investigator had worked with Jude over the past year in her role as a behavioral interventionist and shared that this was a huge step for Jude. She had often been negative about herself and her abilities.

**Progressive muscle relaxation.** An unfortunate incident happened during the eighth session of PMR. The teacher shared that she started her day in a bad mood. Her mood had gotten worse by fifth hour and she was visibly irritated with the students. She told them, out of frustration, they did not have to participate if they did not want to. This resulted in 12 students out of 30 not participating. Even though they did not participate during the majority of the exercise, they all participated in the neck rolls and the shoulder shrugs.

It was during the last two sessions of the progressive muscle relaxation that the students automatically adjusted their sitting position to the position they had been taught
on the CD. They put their feet flat on the floor about eight inches apart and their arms
down by their side or hands lightly in their laps. All but two to three students per class
closed their eyes throughout the sessions. Over 58% of the students started the body
movements before the CD instructed them. It was noticeably quieter. Every time it came
to the neck rolls and the shoulder shrugs, there was 100% participation. The journal
responses reflected this engagement with several students commenting on how good this
made them feel. “I really think that the head and neck really helps but not as much on the
legs/shins/calves. At the end I felt really relaxed and sleepy.” Figure 6 was the picture
this student drew to accompany his written response.

Figure 6. Student’s response to progressive muscle relaxation exercises.

One student consistently did not participate in the PMR exercises throughout the
study. The investigator quietly talked to her about this observation and asked if she
would be comfortable sharing in her journal why she chose not to participate in the PMR
exercises. Her written response was,
I think that this could help a lot of people but I don’t think that it helps me that much because it bothers me to get all tensed up and I do that when I get mad so it reminds me and I get very annoyed.

The investigator’s written response back to her was, “I understand. Maybe the breathing techniques and positive self-talk will work better for you when you feel anxious. Thank you for your honesty.” She shared in future journals how beneficial she thought the breathing and self-talk were for her. “I think the positive self-talk helps a lot with anxiety because it helps the person realize that they have nothing to be worrying about and that nothing can hurt them. Also that they can fill themselves with positive thoughts.”

Jude’s response to the final progressive muscle relaxation exercise was, “It made me feel super relaxed. I think it was because this time I closed my eyes. When the guy on the tape started talking loudly, it sounded like there were crickets in the background.” That is quite a change from her first journal response about PMR.

**Breathing exercises.** The students each hour were able to choose their favorite breathing technique to do for the last session. All five classes chose the energized breathing. Initially, when this breathing technique was introduced, because of the big arm movements and the need for room to windmill their arms, the students got the giggles and there were a lot of bumps and comments. This final session looked almost choreographed, from in sync arm movements to the sound of coordinated breathing.

**Positive self-talk.** For the final session of PST, the co-investigator read the script saying, “Last time though. After today, you may take these phrases home to use them whenever you want or need to. Pick out your favorites that help you the most and use them whenever your feel anxious.” Students shared aloud what they were taking with
them for future use. Students who tended not to participate were specifically asked by
the co-investigator if they had a favorite one that felt right. One student who participated
in all of the exercises but remained very quiet throughout the sessions shared, “I used to
be scared of things, but this has helped me.”

Jude wrote in her last journal how much she appreciated learning new strategies
to help with her anxiety. Her final comment was, “The awesome thing was that this was
helpful!”

**Concluding thoughts of the later sessions.** The question of 10 sessions being too
long for this age group was considered in the data analysis and observations. Lohaus and
Klein-Hessling (2003) examined whether the benefits from relaxation training,
specifically progressive muscle relaxation and imaginative approaches, would increase if
the number of sessions was extended and intensified. One hundred sixty-four fourth and
sixth grade students participated in this study. The children individually attended the
training sessions of either 5 sessions or 10 sessions, depending on the experimental
condition. Although there were immediate benefits from the training, there were nearly
no indicators of increased benefits with extended and/or intensified training. Relaxation
techniques can have a significant calming effect on children over shorter treatment
sessions (i.e., 5 sessions) as compared to extended sessions (i.e., 10 sessions). Because
this study involved three different anxiety-reducing strategies (compared to the Lohaus
and Klein-Hessling study, which just concentrated on the relaxation), 10 sessions would
adequately provide exposure to the three strategies.

Students shared feelings of being sad the study was over. It had become
comfortable hearing all of their voices. This age group was so open and willing to share,
even if some of their thoughts were blunt and to the point. The last comment came from a quiet boy who participated fully in all sessions. “Stuff I learned from you made me more successful. It will help me a whole lot in my life time.”

**Conclusion of Research Question 2.** Analysis of the engagement and response to the anxiety-reducing strategies during the anxiety-reducing lessons revealed that students tended to fall into one of four themes. These themes were (a) students who liked the strategies, (b) students who did not like the strategies, (c) students who did not need the strategies, and (d) students who felt the strategies did not work for them. The data presented multiple incidents of common responses to strengthen these four themes. The biggest group was the group of students who liked the strategies. Seventy-nine percent of the students liked progressive muscle relaxation, 69% liked the breathing exercises, and 79% liked the positive self-talk by the end of the 10-lesson unit.

**Research Question 3**

*How do sixth grade students who complete the 10-lesson unit on anxiety-reducing strategies assess their experience and describe how they will use them in the future?*

The final journal prompts were two open-ended sentence starters and two questions:

- What I liked best about these strategies is . . .
- I think I will use these strategies when . . .
- Do you feel you are better able to control your anxiety and stress now than you were before learning these strategies? Why or why not?
- Your thoughts or comments?
The analyzed responses continued to reaffirm the four possible themes that have been consistently reoccurring in the data. Selecting a random sample of journal responses to the first prompt, 94% of the responses to this prompt were positive about the anxiety-reducing strategies. There were two responses that said that they work sometimes and sometimes not: “They work once out of every thousand times.” One student said he would still not use them because they were boring. Table 8 summarizes what the students liked best about the anxiety-reducing strategies they learned over the last 10 sessions.

The responses to the second prompt of future use of the strategies continued to fit into the four themes that have emerged from the data analysis. The students responded favorably with the exception of a few who still felt they would not use them or that they did not work for them, and a few students who recognized they had anxiety but felt they would still use their own strategies. The responses are categorized into the four study themes in Table 9.

The third question of the final journal session asked students how they would handle stress differently today than they would have 5 weeks ago. The responses provided evidence that anxiety-reducing strategies in the classroom are beneficial for students. Even the students who were negative about the experiences wrote that they could see the value of the strategies, even if it did not work for them. Table 10 illustrates how student responses from this prompt aligned with the four study themes.
Table 8

*What the Students Liked Best About the Anxiety-Reducing Strategies*

<table>
<thead>
<tr>
<th>Student</th>
<th>Sample of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student 4.2</td>
<td>“How relaxing they are. I like to just fall into the peacefulness of some of the techniques.”</td>
</tr>
<tr>
<td>Student 13.2</td>
<td>“That you can use them whenever you want to use them.”</td>
</tr>
<tr>
<td>Student 17.2</td>
<td>“They are easy and are very relaxing. They help a lot when I am stressed out and tense.”</td>
</tr>
<tr>
<td>Student 22.2</td>
<td>“The self-talk pep talk because it gives you confidence.”</td>
</tr>
<tr>
<td>Student 23.2</td>
<td>“I like that they are easy and they don’t take much time.”</td>
</tr>
<tr>
<td>Student 3.12</td>
<td>“There is deep breathing and nobody knows that you are doing it.”</td>
</tr>
<tr>
<td>Student 5.11</td>
<td>“The thing that I liked best about the strategies is that they really worked.”</td>
</tr>
<tr>
<td>Student 2.17</td>
<td>“They really calm you down, if we all did these.”</td>
</tr>
<tr>
<td>Student 3.10</td>
<td>“I like that it is something you can do without something.”</td>
</tr>
<tr>
<td>Student 3.18</td>
<td>“That they are invisible so nobody knows I’m anxious.”</td>
</tr>
<tr>
<td>Student 2.4</td>
<td>“It’s something that you can do almost anytime and anywhere.”</td>
</tr>
<tr>
<td>Student 4.4</td>
<td>“They are easy. Also they don’t take very much time. Another thing is that nobody knows you are doing them when you are.”</td>
</tr>
<tr>
<td>Student 2.24</td>
<td>“It calms me and helps my performance at school.”</td>
</tr>
</tbody>
</table>

**Theme – I don’t like it.**

- Student 4.23 “It was boring and thank you for the blow pops.”
- Student 9.4 “I did not really like the strategies.”

**Theme – It doesn’t work for me.**

- Student 4.14 “Well, I don’t have anxiety so they don’t work on me.”

**Theme – I don’t need it.**

- Student 6.2 “I already had new ways to handle the little anxiety I have.”
### Table 9

**Students’ Responses to Future Use of Strategies**

<table>
<thead>
<tr>
<th>Student</th>
<th>Sample of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Theme – I like it.</strong></td>
<td></td>
</tr>
<tr>
<td>Student 1.2</td>
<td>“I will use it when I get mad or if I am yelled at by my brother or sisters.”</td>
</tr>
<tr>
<td>Student 3.2</td>
<td>“I will always use these when I’m about to play a basketball game.”</td>
</tr>
<tr>
<td>Student 4.2</td>
<td>“I will use these when there is a big test or I am nervous about driving on slippery roads.”</td>
</tr>
<tr>
<td>Student 8.2</td>
<td>“I will use these when I am gonna take a test or before a speech.”</td>
</tr>
<tr>
<td>Student 15.2</td>
<td>“I think I will use the strategies when I am trying to go to bed and my mind is too overwhelmed to sleep.”</td>
</tr>
<tr>
<td>Student 17.2</td>
<td>“I am about to sing or do a presentation in front of people. Also I am going to a concert soon and I will do it so I don’t freak out.”</td>
</tr>
<tr>
<td>Student 3.26</td>
<td>“I get anxious about a test, school, or when stressful. Sometimes things go on in my home and these will help.”</td>
</tr>
<tr>
<td>Student 4.13</td>
<td>“I will use these strategies. I am personally a ‘worry wart’ and these will help me.”</td>
</tr>
<tr>
<td>Student 4.25</td>
<td>“I will use them before talking to a boy I like.”</td>
</tr>
<tr>
<td><strong>Theme – I don’t like it.</strong></td>
<td></td>
</tr>
<tr>
<td>Student 3.15</td>
<td>“I don’t know. I don’t like them.”</td>
</tr>
<tr>
<td>Student 4.24</td>
<td>“Never.”</td>
</tr>
<tr>
<td><strong>Theme – It doesn’t work for me.</strong></td>
<td></td>
</tr>
<tr>
<td>Student 6.4</td>
<td>“Not really because I don’t use strategies a lot because they don’t work for me.”</td>
</tr>
<tr>
<td>Student 9.4</td>
<td>“Not really. I just feel the same. They don’t work for me.”</td>
</tr>
<tr>
<td>Student 4.14</td>
<td>“Well, I don’t have anxiety so I don’t use them.”</td>
</tr>
<tr>
<td>Student 4.23</td>
<td>“The strategies don’t work for me.”</td>
</tr>
</tbody>
</table>
Table 10

*Students’ Responses to How They Would Handle Stress Differently Now Than They Would Have Five Weeks Ago*

<table>
<thead>
<tr>
<th>Student</th>
<th>Sample of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Theme – I like it.</strong></td>
<td></td>
</tr>
<tr>
<td>Student 1.4</td>
<td>“I feel like I can do it anywhere, anytime.”</td>
</tr>
<tr>
<td>Student 4.10</td>
<td>“Yes, I do because now I can go places without anxiety.”</td>
</tr>
<tr>
<td>Student 4.16</td>
<td>“Yes, I do believe it helped me. I feel more calm and relaxed now.”</td>
</tr>
<tr>
<td>Student 4.17</td>
<td>“Yes, because now I know some strategies.”</td>
</tr>
<tr>
<td>Student 4.19</td>
<td>“Yes, because this has taught me how to breathe good.”</td>
</tr>
<tr>
<td>Student 4.25</td>
<td>“Yes, because I can do simple things and nobody knows.”</td>
</tr>
<tr>
<td>Student 4.27</td>
<td>“Yes, because I know what to do!”</td>
</tr>
<tr>
<td>Student 1.10</td>
<td>“Yes, I used to be scared of things but this has helped me.”</td>
</tr>
<tr>
<td>Student 2.10</td>
<td>“Yes, because I can do something that helps.”</td>
</tr>
<tr>
<td>Student 4.11</td>
<td>“Yes! Because I can now control myself better.”</td>
</tr>
<tr>
<td>Student 5.10</td>
<td>“Yes, because I actually know how to do them.”</td>
</tr>
<tr>
<td>Student 7.10</td>
<td>“Yes, I do because I have a strategy to use now.”</td>
</tr>
<tr>
<td>Student 9.10</td>
<td>“Yes, now that I have learned these strategies, I will use them. I believe they really do relax you and everybody deserves relaxation.”</td>
</tr>
<tr>
<td><strong>Theme – I don’t need it.</strong></td>
<td></td>
</tr>
<tr>
<td>Student 2.4</td>
<td>“Kind of. I’ve got my own ways but still.”</td>
</tr>
<tr>
<td>Student 5.10</td>
<td>“A little bit, because I knew some of them in the first place so it really is just a refresher course.”</td>
</tr>
</tbody>
</table>
Table 10—Continued

<table>
<thead>
<tr>
<th>Student</th>
<th>Sample of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Theme – <em>They don’t work for me.</em></strong></td>
<td></td>
</tr>
<tr>
<td>Student 4.6</td>
<td>“Not really because I don’t use strategies a lot.”</td>
</tr>
<tr>
<td>Student 4.9</td>
<td>“Not really. I just feel the same.”</td>
</tr>
<tr>
<td>Student 4.23</td>
<td>“Throughout the weeks, I didn’t feel it. The strategies don’t work for me.”</td>
</tr>
<tr>
<td><strong>Theme – <em>They don’t work for me.</em></strong></td>
<td></td>
</tr>
<tr>
<td>Student 6.2</td>
<td>“I am bored with them and I have ADHD so I can’t focus anyway.”</td>
</tr>
</tbody>
</table>

The final prompt gave the students an opportunity to share any final thoughts or comments. Though many students chose not to respond to this option, there were several students who did.

- “I will keep on doing these for the rest of my life.”
- “This will help me a whole lot in my life time.”
- “I will use these strategies in the future. They do work.”
- “The awesome thing was that this was helpful.”
- “I really liked these sessions because they showed me ways to erase my anxiety a little and I get anxious a lot.”
- “I love using these strategies!”
- “I really liked this program and I liked how calm and relaxed you feel afterwards.”
• “My final thought is that it’s really cool I’m able to help anxiety studies by having fun and being relaxed!”

• “Thank you for teaching us these techniques!!”

One student, who had written in his journal that he was in special education, came up to the investigator and shared his final comment: “I told my friend Mrs. B was nice but I do not like this class.”

When the teacher shared her observations, she mentioned she was surprised by the engagement of the two students who were considered gifted from previous testing. These two girls attended the Academically Talented Youth Program (ATYP) at Western Michigan University during the school day and came in late for this class period. The parents of one of the students had specifically talked with the teacher at the fall parent–teacher conference about their daughter’s high anxiety. This student was never fully engaged and spent at least part of each session giggling, playing with jewelry, looking around, and, during one session, writing. Her journals, however, did not align with her behavior. She shared that the strategies were quite effective, especially for her because she was “stressed out all of the time” and she felt these strategies would help her handle stress a lot better.

The second student never looked as though she was fully engaged or even interested in the anxiety-reducing strategies. She wrote that these strategies “worked better than I thought they would” and that she felt “more in control of my stress and anxiety than before.”

Conclusion to Research Question 3. Through the analysis of data on how students assessed their experience with anxiety-reducing strategies and their future use of
these strategies, the participants as a whole described positive experiences while learning and practicing these strategies. Though the data showed the breathing techniques as the most favorable, both the progressive muscle relaxation and the positive self-talk were strategies many students reported they liked and would use in the future. This study helped strengthen and gave names to the strategies, as well as teach students how to use them when they feel anxious in school.

Over half of the sixth grade students reported that they liked the strategies and planned to use them in the future. Sporting events, band competitions, tests and quizzes, and projects continued to be written about in the journals as anxiety-producing situations where the students would use one of the strategies. One student’s response summed up the value many students placed on the strategies: “They are easy. Also they don’t take very much time. Another thing is that nobody knows you are doing them when you are. I will keep on doing these for the rest of my life.”

**Research Question 4**

*How do sixth grade students who complete the 10-lesson units on anxiety-reducing strategies compare to the control group who did not, regarding the ways they describe responding to anxiety-reducing situations in school?*

Both the experimental group and the control group completed the post-questionnaire a week after the sixth grade students completed the 10-lesson units on anxiety-reducing strategies. Table 11 shows the responses to the question of how they would respond to anxiety-reducing situations in school.
Table 11

*Post-Questionnaire Experimental and Control Groups’ Responses to Anxiety-Producing Situations*

<table>
<thead>
<tr>
<th>Responses</th>
<th>Experimental group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ignore it</td>
<td>0</td>
<td>19</td>
</tr>
<tr>
<td>Do something else to forget it</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Positive self-talk</td>
<td>66</td>
<td>28</td>
</tr>
<tr>
<td>Breathing exercises</td>
<td>118</td>
<td>17</td>
</tr>
<tr>
<td>Progressive muscle relaxation</td>
<td>64</td>
<td>0</td>
</tr>
<tr>
<td>Relax, stay calm</td>
<td>18</td>
<td>25</td>
</tr>
<tr>
<td>Go to friends for help</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Talk to someone (parent, teacher)</td>
<td>3</td>
<td>26</td>
</tr>
<tr>
<td>Work harder, study more</td>
<td>0</td>
<td>22</td>
</tr>
<tr>
<td>Just do it</td>
<td>0</td>
<td>19</td>
</tr>
<tr>
<td>I don’t know/understand</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>I don’t have anxiety</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>11</td>
<td>34</td>
</tr>
</tbody>
</table>

These data provided encouraging information as to the benefits of embedding these strategies into the classroom.

**Progressive muscle relaxation exercises.** One of the intents of the study was to teach the students the names of the anxiety-reducing strategies. Many of the responses from both groups on the pre-questionnaire to anxiety-producing situations in school were to “calm down” or “relax.” Thirty students in the control group responded that they would relax or calm down when in anxious situations, compared to the 23 students in the
experimental group on the pre-questionnaire. There was not enough information to
decipher exactly what they would do to calm down or relax. There were no students in
either group who mentioned progressive muscle relaxation on the pre-questionnaire.
Although 25 students in the control group and 18 students in the experimental group still
responded that they would relax or calm down, 64 students in the experimental group
specifically responded that they would use progressive muscle relaxation when they were
in anxious situations in school.

Breathing exercises. The number of students in the experimental group who
previously reported using breathing techniques as a response to anxiety-producing
situations in school increased from 12 responses to 118 responses. Students in the
control group also mentioned deep breathing as a response to anxiety-producing
situations and their responses increased slightly from 17 in the pre-questionnaire to 20 in
the post-questionnaire. Throughout the study, the breathing exercises received the most
favorable responses in the journals. The engagement of students was consistently higher
during the breathing exercises.

Positive self-talk. Positive self-talk was one of the strategies many students had
prior knowledge of when the study began. Students wrote and spoke of others in their
lives who had an influence in teaching them this strategy, whether it was other people
saying positive things about the student or others who taught the student to use positive
self-talk to get through difficult situations. Both the experimental group and control
group used positive self-talk. From the pre-questionnaire to the post-questionnaire, the
experimental group’s response increased from 12 to 66; the control group’s response
decreased from 43 to 28. Targeted instructions provided the students an opportunity to
become aware of what positive self-talk actually was and how it could be beneficial
during stressful times.

**Other.** There were still a number of students in both the experimental group and
the control group whose responses fell into the “other” category. These responses were
single responses that did not fit into any of the established categories. After analyzing the
11 responses from the experimental group and rereading journals, it was discovered that
the students who consistently reported that they did not like the strategies or who felt they
did not work for them, continued to share different ways of working through their
anxiety, such as “wiggle my toes,” “look at the clock,” ”rub my eyes,” and “go outside
and take a walk.”

**Conclusion to Research Question 4.** Evidence showed the students in the
experimental group benefitted from the anxiety-reducing strategies when they were
embedded into the classroom. Though the responses from the control group varied little
from pre-questionnaire to post-questionnaire, the responses from the experimental group
varied greatly. Table 12 shows six categories that had significant change as a result of
the anxiety-reducing instruction.

The students were used to learning in a group, so learning and practicing the
anxiety-reducing strategies in a group provided a level of comfort to the students. No one
group was targeted or treated differently. All students learned and practiced together.
The students were able to gain this knowledge through a spiral system and the names of
the strategies were repeated multiple times on the CD. The benefits of these strategies
were also repeated multiple times on the CD. There remained six to nine students who
consistently said the strategies did not work or that they did not like them, but by being
exposed to the lessons for 10 sessions, they heard and saw the program in action with their peers. Also, in a few cases, students’ journal writings revealed a greater appreciation for the strategies than that expressed in class or demonstrated through class participation.

Table 12

*Variance of Responses From Pre-Questionnaire to Post-Questionnaire With Experimental Group*

<table>
<thead>
<tr>
<th>Responses</th>
<th>Pre-Questionnaire</th>
<th>Post-Questionnaire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ignore it</td>
<td>17 (12)</td>
<td>0 (19)</td>
</tr>
<tr>
<td>Positive self-talk</td>
<td>12 (43)</td>
<td>66 (28)</td>
</tr>
<tr>
<td>Progressive muscle relaxation</td>
<td>0 (0)</td>
<td>64 (0)</td>
</tr>
<tr>
<td>Breathing exercises</td>
<td>12 (20)</td>
<td>118 (17)</td>
</tr>
<tr>
<td>Just do it</td>
<td>13 (30)</td>
<td>0 (19)</td>
</tr>
<tr>
<td>I don’t know/understand</td>
<td>24 (0)</td>
<td>0 (12)</td>
</tr>
</tbody>
</table>

*Note.* Control group responses in parentheses.

**Analysis of Themes**

It was apparent in the sessions and through the journals that this age group was very open to new experiences from the very beginning. Subtle changes to their acceptance of the anxiety-reducing strategies started to show up by the fourth journal. The first two themes that began to emerge were those who really like the strategies and those who clearly did not like the strategies. The journals were read and reread along with the observation notes and field notes on conversations with the co-investigator and
the teacher. Two more themes emerged and added to the initial analysis. The four distinct themes that emerged were:

- students who really liked the strategies;
- students who did not like the strategies at all;
- students who felt they did not need these strategies; and
- students who did not feel the strategies worked for them.

The students who tended to stay engaged and positive throughout the study captured the idea of taking control of their needs and doing something about them as was evident in their consistent participation during the anxiety-reducing strategies. They had a sense of autonomy to their words and actions.

The challenging analysis came with the last three groups. What about these strategies didn’t they like? Why didn’t they feel they needed these strategies? What didn’t work for these students? They were quite specific in their journals about which strategy worked best for them and each week, more students reported finding benefit from at least one. There remained between 8 and 11 students who stayed in the last three groups.

After several rounds of data analysis and reduction, final themes emerged that explained the last three groups. Students who fell into the “I don’t need it” theme were students who were very confident in their ability to use what they have learned from counselors, parents, or, in one case, a third grade teacher. “Mr. K., my third grade teacher, taught me, ‘I know I can. I think I can. I will.’ That has always worked for me.” Another student with an anxiety disorder shared, “I have done these before in therapy. I think they work well. I keep some note cards in my backpack for when I get nervous.”
This group of students had a sense of self-advocacy. They knew what worked for them and held strong to their strategies. One of the strongest self-advocates was Jude. The difference between Jude and the other self-advocates was that Jude eventually opened herself up to adding new tools to her tool box to further assist her with dealing with her severe anxiety.

Students who reported that they did not like the strategies were consistent each week in their opinions. They reported feeling uncomfortable or that the strategies were weird or silly. Reviewing the observation notes, these students displayed behaviors that reflected their feelings about the strategies. They looked around the class a lot, laughed at various parts of the CD (i.e., “push your lips out in an O shape”), and often put their heads down on their desks. There were more boys in this group but not a significant difference (three girls and five boys). There was not enough evidence to really understand why they hung on to such a strong feeling except that this was the age (11–13 years old) when anxiety tends to move from concrete specific fears to more abstract worries and interpersonal concerns that can really interfere with the learning process (Masia-Warner et al., 2005). Perhaps peer pressure and how they are perceived by their friends overshadowed the benefits of these strategies. “I would not do these . . . people would see and laugh.” These students fell into Kondo and Ying-Ling’s (1994) group of disaffiliation. They had little to no participation, and often left during the sessions or did not attend to avoid them all together. Students from this group were the ones who asked to leave to use the restroom on several occasions and two students missed an average of 3 sessions out of the 10.
Six out of nine of the students who consistently reported that the strategies did not work for them were students who had disclosed in their journals that they were special needs. Perhaps the group was too large for comfort and focus. One student shared, “I can’t focus on them because I have ADHD.” The sessions ran from 15–25 minutes. Shorter sessions may be more acceptable for these students. The students in this group fit the resignation group in that they did not do anything for their anxiety, whether by choice or ability. The data showed that they never fully participated during the data points. They played with things around their desk or with their hair.

The four themes stayed consistent after cross-analyzing all the themes and subthemes from weekly journals, observations, and field notes. Table 13 summarizes the findings that support the four themes of my study.

Table 13

*Themes From Data Analysis*

<table>
<thead>
<tr>
<th>Responses</th>
<th>Progressive muscle relaxation</th>
<th>Breathing exercises</th>
<th>Positive self-talk</th>
</tr>
</thead>
<tbody>
<tr>
<td>I like it! I’m in control!</td>
<td>121 (79%)</td>
<td>106 (69%)</td>
<td>122 (79%)</td>
</tr>
<tr>
<td>(Autonomy)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I don’t like it.</td>
<td>8</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>(Disaffiliation)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I don’t need it.</td>
<td>5</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>(Self-advocacy)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It doesn’t work for me.</td>
<td>8</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>(Resignation)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Critical Theory Revisited

The theoretical lens that provided the deepest advocacy perspective for this study was the Critical Theory. This theory was concerned with empowering a marginalized group of human beings to rise above the constraints that hold them back from a full life (Fay, 1987). Empowerment came with control of the students’ anxiety in the school setting. Researchers have found that stress and anxiety can be reduced if the person perceives some degree of control over his or her environment (Friedman, Lehrer, & Stevens, 1983).

Students were told that their opinion and input was important to my study from the very beginning of the study. They were given permission to be honest and a safe environment was created to allow for their voices to be heard. Students were given the opportunity to reflect on and question their experiences throughout the 10-session unit. The journaling allowed the students to put a value on their experience. Students began to report that they were taking control of how they respond to anxiety-producing situations in school by being able to learn and practice, as well as talk about their experiences. One noticeable change was the response to “ignore” the anxious situations. Seventeen students from the experimental group responded that they would ignore it on the pre-questionnaire. No experimental group students chose to ignore the situation on the post-questionnaire. Another important change was that 24 students from the experimental group said they did not understand or know how to respond to anxiety-producing situations on the pre-questionnaire (see Table 12). There were no experimental group students who were unsure of what to do on the post-questionnaire.
The students’ voices were getting stronger and stronger as the journal writing continued through the 10 sessions. “I can do this. I am in control of myself and thoughts and choices. I have power to control the thoughts I want to think and if I don’t like them, I can change them.” Another shared, “If you get a bad thought, you can replace it. You can control your thoughts.” A third wrote:

It makes me stronger and have thicker skin. It makes me happy and it can change my mind very quick. I like the phrases because they make me feel in control and I like how they sound. I am in control of the thoughts I want to think.

Designing this study through a Critical Theory lens kept everything focused on providing these students with the opportunity to take control and improve their lives.

**Chapter IV Summary**

The purpose of this study was to explore how students in a sixth grade class experienced and responded to anxiety prior to, during, and after receiving instruction in anxiety-reducing strategies that are embedded in the classroom. Qualitative data were collected through journals the students kept, pre-questionnaires and post-questionnaires, observation notes, and field notes. After nine rounds of data analysis and reduction, four strong themes, in the words of the students, were identified: (a) “I like it,” a demonstration of autonomy; (b) “I don’t like it,” a demonstration of disaffiliation; (c) “I don’t need it,” a demonstration of self-advocacy; and (d) “It doesn’t work for me,” a demonstration of resignation.

The strongest theme that emerged from the study was “I like it” (autonomy). The students had learned three research-based strategies, the specific names of these strategies, and the benefits of learning and using these strategies to assist them in
handling their anxiety during anxiety-producing situations in school. Twelve students reported that they had previously used positive self-talk during anxious situations in the pre-questionnaire. Breathing exercises were used by 12 students, and 23 students reported that they tried to relax and stay calm. After learning and practicing progressive muscle relaxation, breathing, and positive self-talk, the numbers increased significantly. Students responses that they used positive self-talk increased from 12 to 66 from the pre-questionnaire to the post-questionnaire. Sixty-four students in the experimental group reported using progressive muscle relaxation in the previous 2 weeks when they dealt with anxious situations in school. After the 10 sessions, the experimental group of students had a name and strategy to help them relax and calm down.

Breathing exercises saw the most significant increase, with 118 students in the experimental group reporting in their final journal entries that they had used the breathing exercises in the previous 2 weeks to deal with their anxiety during anxiety-producing situations. One student, at the end of the 10 sessions, reported, “Now that I have learned these strategies, I will use them. I believe they really do help me relax.” Another shared, “I think I can handle anxiety better because I can calm myself down if I need to more easily than I could have before.”

It was important to give these children and adolescents a voice and listen to their understanding and experiences of anxiety. The theoretical lens that provided the deepest advocacy perspective for this study was the Critical Theory. The data collected from the journals and the pre-questionnaires and post-questionnaires, as well as the observation notes and the field notes, showed a significant positive change in the students’ ability to control their anxiety during anxiety-producing situations by using one or more of the
strategies. “I really liked these sessions because they showed me ways to erase my anxiety a little and I get anxious a lot.”

Empowering these students to take control and not wait for an adult to come to their aid was important in this study. The data showed that students could be empowered by learning and practicing anxiety-reducing strategies when embedded in the classroom. A student in second hour wrote, “It makes me feel like I am in control.” Another shared, “I feel I can control my anxiety better because I can relax.” Jude’s last journal entry was, “I can do this. I am in control of myself and thoughts and choices.”
CHAPTER V
DISCUSSION

This chapter offers an overview of this research study and the importance derived from the findings presented in Chapter IV. This chapter also connects this research with existing literature. Limitations of the study will be discussed, as will implications for curriculum planning, policy, procedures, and the need for future studies.

Summary of Major Insights

Anxiety disorders are among the most prevalent childhood psychological disorders experienced by 10 to 21% of children today. With its frequency and the potential for multiple negative consequences, anxiety disorders have been named “one of the greatest health problems . . . in terms of global burden of disease” (Murray & Lopez, 1996, p. 29). Anxiety disorder impacts the lives of many children who are unable to access traditional treatment methods. With increased incidents of anxiety and its manifested health issues, it is critical that educators teach children and adolescents to manage their anxiety and stress so they can reduce the risk of long-term health concerns. The aim of this investigation was to learn through the eyes and experiences of the students, as they participate in classroom-embedded anxiety-reducing strategies.

The research question was: How do sixth grade students experience and respond to anxiety prior to, during, and after receiving instruction on anxiety-reducing strategies that are embedded in the classroom? The four subquestions for this study were:
1. How do sixth grade students describe their feelings and behaviors with anxiety before the anxiety-reducing strategies?

2. How do sixth grade students engage with and respond to the instructions on anxiety-reducing strategies during the anxiety-reducing lessons?

3. How do sixth grade students, who complete a 10-lesson unit on anxiety-reducing strategies, assess their experience and describe how they will use them in the future?

4. How do the sixth grade students who complete the 10-lesson unit on anxiety-reducing strategies compare to the control group who did not, regarding the ways they describe responding to anxiety producing situations at school?

This action research case study explored how 154 sixth grade students experienced and responded to anxiety prior to, during, and after receiving 10 lessons of instruction in anxiety-reducing strategies in the classroom compared to a group of similar students who did not receive instruction in anxiety-reducing strategies in the classroom. Three research-based strategies were taught: (a) progressive muscle relaxation, (b) breathing exercises, and (c) positive self-talk. Qualitative data were collected through journals the students kept, pre-questionnaires and post-questionnaires, observation notes, and field notes. Four strong themes, in the words of the students, were identified: (a) “I like it,” a demonstration of autonomy; (b) “I don’t like it,” a demonstration of disaffiliation; (c) “I don’t need it,” a demonstration of self-advocacy; and (d) “It doesn’t work for me,” a demonstration of resignation. The strongest theme that emerged from the study was “I like it” (autonomy).
The data collected from the journals and the pre-questionnaires and post-questionnaires, as well as the observation notes and the field notes, showed a significant positive change in the students’ ability to choose strategies to help control their anxiety during anxiety-producing situations by using one or more of the strategies. The response of students in the experimental group that they would use progressive muscle relaxation during anxious situations at school increased from zero on the pre-questionnaire to 64 on the post-questionnaire. The response of students in the control group did not mention the use of progressive muscle relaxation on either the pre-questionnaire or the post-questionnaire. Experimental students’ response that they would use the breathing exercises increased from 12 on the pre-questionnaire to 118 on the post-questionnaire. The control group students’ responses that they would use breathing decreased from 20 on the pre-questionnaire to 17 on the post-questionnaire. Students in the experimental group’s responses that they would use positive self-talk during anxious situations at school increased from 12 on the pre-questionnaire to 66 on the post-questionnaire. Students in the control group were more positive on the pre-questionnaire, with 43 students saying they would use positive self-talk during anxious situations, than on the post-questionnaire when this decreased to 28 responses. Both groups in the pre-questionnaire and post-questionnaire reported they would try to relax and calm down. There was not enough information to decipher what strategies they would use to help them calm down and relax.

The progressive muscle relaxation (PMR), deep breathing, and positive self-talk were practical interventions that were not time-intensive, required minimal training, were cost-efficient, did not need any specialized equipment or music, and were easily learned.
They could also be used immediately anywhere, inside of school or out, and were virtually invisible to the human eye. To choose a treatment that further draws attention to this age group, who sometimes struggle with self-image and fitting in, did not fit the intent of this study. Providing tools for children and adolescents to use at will when in anxious situations or events empowered them to take control over how they respond and provided support in coping with their everyday problems to avoid more severe problems in the future.

**Relationship of Results to Existing Studies**

Anxiety in school-aged children affects both their quality of life and their ability to benefit fully from their school experience (Tramonte & Willms, 2010). The literature review had revealed multiple research projects investigating the relationship between anxiety and student achievement in various subjects and test-taking. Real or perceived, anxiety was found to negatively impact both quality of life and student achievement. This section discusses the relationship between my study and previous research in the areas of (a) common themes, (b) younger participants, (c) number of sessions for maximum benefit, (d) short-term benefits, (e) anxiety-reducing strategies in schools, (f) positive self-talk as an anxiety-reducing strategy, and (g) the value of anxiety-reducing strategies on different populations.

**Common Themes**

My study had parallels to the study by Kondo and Ying-Ling (1994). Of the four themes found in Kondo and Ying-Ling’s study, two consistently presented themselves in this study: resignation and disaffiliation. A small group of students in my study were resigned to the fact that they were unable to make any positive changes in their response
to their anxiety. “I have ADHD so I have trouble focusing.” “It doesn’t work for me.”
Another small group used multiple techniques to get out of doing the relaxation techniques. Bathroom usage and attendance issues were common in this group.

**Similar Study, Different Grade Level**

The 2010 quantitative study by Larson, El Ramahi, Conn, Estes, and Ghibellini supports the results of my study. One hundred seventy-seven third graders were taught relaxation techniques in school for 2 days a week for 5 weeks. A tape was used to guide them through the relaxation of muscle groups. Like my study, their results indicated a significant positive effective between the pretest and the posttest in reducing anxiety in the experimental group. Their control group of third graders showed no significant difference between the pretest and the posttest. Both studies show the benefit of teaching relaxation exercises to young students during the school day.

**Number of Sessions**

Lohaus and Klein-Hessling’s (2003) research found no clear indication that increasing the number of sessions was more beneficial when investigating the length of the training required to adequately reduce anxiety. They found relaxation techniques can have a significant calming effect in children over shorter treatment sessions (i.e., 5 sessions) as compared to longer sessions (i.e., 10 sessions). My study introduced three relaxation strategies over 10 sessions, unlike Lohaus et al., who utilized only one technique, and positive engagement and responses toward the strategies started to show during the fourth session. Students who were initially resistant to the strategies and the benefits of learning them reported positive change in their feelings of control during anxiety-producing times by the eighth and ninth sessions. Expanding the investigation to
10 sessions allowed the reluctant learner enough opportunity to fully experience all three strategies.

**Short-Term Benefits**

The intent of my study was not to “fix” anxiety but to empower the students to use the strategies to decrease anxiety during anxiety-producing situations in schools. Lohaus, Klein-Hessling, Vogele, and Kuhn-Henninghausen (2001) supported this intent in their study on the short-term benefits of relaxation techniques. Their data showed that children benefit from relaxation training and that instruction during the training produced a sense of calm, even in very young children. Their final word was of caution not to expect long-term benefits, but the short-term benefits of relaxation and feelings of calmness were worthy of the training. The purpose of empowering these children and adolescents to utilize relaxation techniques when they feel anxious does not call for long-term benefits but for relief at the moment so they can successfully maneuver through the current situation or event. My study also produced evidence of short-term benefits from strategies that experimental group students reported using as the sessions progressed. My study design, however, did not allow for an examination of longer-term benefits as the data collection ended with the final sessions of the class series.

**Treatment in School**

Clinic-based programs that treat anxiety are readily available, yet anxious children and adolescents are rarely referred (Kashdan & Herbert, 2001). Providing anxiety-reducing strategies in the classroom as part of the curriculum would reach many more children and adolescents before their anxiety manifests into life-long health issues. Support for relaxation training in the schools had been suggested by Frederick since
1975. Frederick believed that the most obvious indicator of tension and stress, and the one most commonly associated with behavior, was muscle tension, not the physical symptoms often treated with medication. Like my study, his solution required no sophisticated equipment and needed minimal training for teachers. Frederick trained students to recognize tension signals and then walked them through relaxation techniques quickly to reduce anxiety until they were independently able to put these strategies in place. Both studies taught students to learn to relax away unnecessary stress and anxiety in order to perform daily tasks and activities with greater efficiency. Frederick found that students trained in relaxation techniques enjoyed learning to “run themselves technically” (p. 6). The responses from the journals in my study, as well as the spontaneous conversations confirmed this finding. “I really liked these sessions because they showed me ways to erase my anxiety a little and I get anxious a lot.”

Positive Self-Talk

Adding positive self-talk to the anxiety-reducing techniques proved to be a beneficial strategy for many of the students. As discussed in Chapter IV, students in the experimental group increased their use of positive self-talk during anxiety-producing situations in school from 12 responses on the pre-questionnaire to 66 responses on the post-questionnaire. Kendall and Ronan (1997) studied 542 children from the ages of 7 to 15. The results indicated that negative self-talk was more influential on increasing anxiety levels than positive self-talk was on decreasing anxiety levels. Their findings support my current finding that utilizing a treatment that decreased or blocked negative self-talk and increased positive self-talk would decrease anxiety and depression significantly.
Treatment on Mixed Populations

My study did not attempt to categorize groups of students but looked at half of the sixth grade class regardless of gender, disability, evidence of gifted abilities, or ethnic group. In a similar study, Francesco, Mauro, Gianluca, and Enrico (2009) found that relaxation was effective in reducing anxiety in any kind of participant, male or female, young or old, or affected or not by physical or psychological disorders. Breaking down the population is a topic for a future study.

In addition to these thematic alignments, Table 14 summarizes the 11 take-aways from my research.

Table 14

Comparison of Buchler Research with Previous Research Findings

<table>
<thead>
<tr>
<th>Buchler Research (2013)</th>
<th>Previous Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Students at this age respond to the anxiety-reducing strategies in four ways: (1) autonomy, (2) disaffiliation, (3) resignation, and (4) self-advocacy.</td>
<td>– Affirms and adds to Kondo and Ying-Ling (1994), who found five survival techniques for dealing with anxiety: (1) disaffiliation, (2) resignation, (3) relaxation, (4) positive thinking, and (5) passivity.</td>
</tr>
</tbody>
</table>
| 2. Students in 6th grade were at an appropriate age to empower with anxiety-reducing strategies. | – Adds to Larson, El Ramahi, Conn, Estes, and Ghibellini (2010) who had a significant positive effect with third graders using relaxation of muscle groups.  
– Affirms Francesco, Mauro, Gianluca, and Enrico (2009), who found relaxation to be effective in reducing anxiety with students of any age. |
| 3. Ten sessions offered enough repetition to learn, practice, and reflect on this new learning. | – Affirms Lohaus and Klein-Hessling (2003), who found that children have the ability to learn progressive muscle relaxation techniques in a short amount of time.  
– Adds to Lohaus and Klein-Hessling by adding two more anxiety-reducing strategies within a 10-session learning unit was beneficial. |
<table>
<thead>
<tr>
<th>Buchler Research (2013)</th>
<th>Previous Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Short-term benefits of anxiety-reducing strategies were reported by students through journals and questionnaires.</td>
<td>– Affirms Lohaus, Klein-Hessling, Vogele, and Kuhn-Henninghausen (2001), whose study on short-term benefits for children show the benefits of relaxation and feelings of calmness are worthy of the training.</td>
</tr>
</tbody>
</table>
| 5. Embedding anxiety-reducing strategies in the classroom provided a more risk-free atmosphere to learn and practice the strategies. | – Affirms McLoone, Hudson, and Rapee (2006), whose research on barriers to seeking treatment supporting schools as a viable setting for identifying and addressing anxiety concerns.  
– Affirms Garcia-Lopez, Muela, Espinosa-Fernandez, and Diaz-Castela (2009), who support implementing proactive strategies in the context where socially anxious adolescents spend most of their time. |
| 6. Progressive muscle relaxation was an appropriate and beneficial strategy to teach children and adolescents at this age. | – Affirms Frederick (1975), who found the most obvious indicator of tension and stress was muscle tension.  
– Affirms Wolpe (1948), who studied the benefits of relaxation as a way to countercondition the fear response, thus reducing the symptoms of stress.  
– Affirms Molinari (2008), who found progressive muscle relaxation to be superior to other relaxation techniques.  
– Adds to Margolis and Pica (1990), who used an audiotape to provide the progressive muscle relaxation techniques to high school students. |
| 7. Positive self-talk was an appropriate and beneficial strategy to teach children and adolescents at this age. | – Affirms and adds to Kendall and Ronan (1997), whose results indicated that negative self-talk was more influential on increasing anxiety levels than positive self-talk was on decreasing anxiety levels.  
– Affirms and adds to Hiebert, Uhlemann, Marshall, and Lee (1998), who found a higher level of anxiety with negative self-talk and lower level of anxiety with positive self-talk. |
Table 14—Continued

<table>
<thead>
<tr>
<th>Buchler Research (2013)</th>
<th>Previous Research</th>
</tr>
</thead>
</table>
| 8. Breathing exercises were an appropriate and beneficial strategy to teach children and adolescents at this age. | – Affirms and adds to Larson, El Ramahi, Conn, Estes, and Ghibellini study (2010), which found by teaching elevator breathing technique, there was a significant decrease of anxiety in 177 third grade students.  
– Adds to Han, Stegen, De Valck, Clement, and Van De Woestijne (1996) study on breathing therapy on various health concerns such as anxiety. |
| 9. Students in 6th grade are able to learn and use multiple anxiety-reducing tools to reduce their response to anxiety-producing situations in school. | No previous research of teaching multiple anxiety-reducing strategies to 6th grade students.                                                                 |
| 10. Students in 6th grade were able to describe their feelings and behaviors with anxiety prior to, during, and after receiving instruction in anxiety-reducing strategies embedded in school. | No previous research found.                                                                                                                                 |
| 11. When given tools and words, 6th grade students can be empowered to control their anxious responses when in anxiety-producing situations. | – Affirms Friedman, Lehrer, and Stevens (1983), who found that stress and anxiety can be reduced if the person perceives some degree of control over his or her environment. |

**Beyond the Results**

Beyond the numbers and results of the anxiety-reducing strategies embedded in the classroom came two surprising results. The first surprise was how, through the process of learning and practicing the anxiety-reducing strategies, the culture and environment of the room began to change. In the beginning, there was an active, noisy atmosphere throughout the class period. As the strategies were learned, practiced, and reflected in the students’ journals, the environment and culture of the classroom became...
peaceful and relaxed. One student wrote, “I like to just fall into the peacefulness of some of the techniques.” Another wrote, “My favorite thing about the strategies is the fact that they relax me very well and then I have a very good day.” It was also observed that this peaceful atmosphere was easily affected by the teacher depending on her disposition each day. One day, the teacher shared that she was in a bad mood and was impatient with the students. When a couple of students did not want to participate in the first strategy, progressive muscle relaxation, she gave them permission to not participate as long as they sat in their seats and stayed quiet. This simple direction by the teacher changed the culture and environment for the entire class. Behaviors and comments that were more frequent during the first and second week of the study resurfaced. Students looked around, put their heads on their desk, and made comments at parts of the instruction they had not commented on since the first few sessions. When the deep breathing strategy was practiced, the researcher asked for full participation, and the culture and environment returned to the peaceful, relaxed environment. This simple experience demonstrated the importance of the commitment from the educators and leadership in the school and the need of the students for teacher ongoing support and modeling.

The second surprise was cultivated from the first day of the experiment. When the experiment was introduced to the students, the researcher asked for their assistance by participating in the experiment and sharing if they felt the anxiety-reducing strategies would be beneficial for other students to experience and use during anxiety-producing situations that happen during the school day. The students took this request seriously and often brought their “job” expectations up in spontaneous conversation and in their
journal. One student wrote, “My final thought is that it’s really cool I’m able to help anxiety studies by having fun and being relaxed.”

During a spontaneous discussion at the final session, one student shared with the class, “What I want others to know is that they are easy. Also they don’t take very much time. Another thing is that nobody knows you are doing them when you are.” Another student added, “I helped my dad not to be so anxious about stuff by using the tools.” A young man who was quiet through the entire experiment added, “It really helps when we just take time off of our work and release all of our stress by doing some slow breathing.” These sixth grade students took their job seriously and wanted to provide input into future curriculum or policy decisions. They wanted their voices heard. One student suggested that this program be introduced and practiced every day, starting in third grade, so that by the time students reached sixth grade, they would have these tools to use right away.

This observation is important to educational decision-makers and curriculum coordinators. Students as young as sixth grade have value in their opinions and experiences, especially when time is taken to gather these data and provide a deeper understanding of the curriculum through pilot programs and frequent spontaneous conversation with students. “My final thought is thank you for all of your help. I hope you got what you needed and thanks again for teaching us we can relax.”

**Implications for Future Research (Limitations)**

Limitations show possible weakness to a study. Since there were no exclusionary criteria for this study, other than the student must be in the sixth grade, the investigator had no knowledge of how many students had a diagnosis of anxiety and thus was unable to differentiate the benefits from those who were formally diagnosed and those who do
not have a diagnosis of anxiety. It was not possible to answer if these anxiety-reducing strategies were more beneficial for students who had an anxiety disorder than for students who did not. A future study targeting students having a formal diagnosis of an anxiety disorder and the benefit of learning and using anxiety-reducing strategies during the school day would provide important data to educational leaders and curriculum teams.

Another limitation was full participation in the anxiety-reducing strategies could not be forced. Being a new concept for these students, who have been in traditional classrooms learning traditional curriculum for 7 years, the students may not have been comfortable with the strategies. There was no way of knowing if all the voices were being heard or if all the experiences were being captured. Though the journals allowed for free expression through both words and/or pictures, it was unknown if this type of data collection provided true perspectives of the experience. The students who reported that they did not like the strategies or that the strategies did not work for them tended to write very little to explain their experiences. A future study that replicates this study might choose to interview these students independently or through focus groups to gain more insight into their experiences.

A third limitation was the selected grade level. Research indicated anxiety starts to peak at the middle school age and middle school was also the time when students started to worry about what their peers thought of them (Masia-Warner et al., 2005). Peer pressure intensified, and “fitting in” was important. These internal feelings may have skewed the experiences of the participants in this study. An earlier grade level may have been more appropriate to begin anxiety-reducing instruction. One student shared in her journal, “I think that this would be helpful more in the 3rd grade so we have it for the
future to handle things.” Indeed, Larson et al.’s (2010) quantitative study investigated the benefits of teaching relaxation techniques in school to 177 third grade students. The results indicated a significant difference between the pretest and the posttest in reducing anxiety. Replicating this research using a qualitative approach would provide valuable information of the experiences of the children in their voices. This information would guide curriculum planners and educators in providing the emotional support, as well as the academic support children need to increase success in their educational journey.

A fourth limitation was the timing of the data collection. The data collection took place in January and February. During the data collection, the students experienced six snow days, causing longer gaps between sessions. The students had only one session a week for 2 weeks straight due to weather. Having two sessions a week provided continuity and flow for practice and master of techniques. Conducting this research in the beginning of the year and following the students throughout the year for evidence of using the anxiety-reducing strategies during anxiety-producing situations would provide rich data for educational decision-makers.

**Implications for Policy, Practice, and Organization**

An important benefit of offering anxiety-reducing strategies within the classroom is that, by partnering with the school, multiple opportunities can be created to educate and support school personnel, parents, and students. With thought and researched-based strategies, it can be a win-win situation for everyone involved. With the expectations of content delivery increasing with the Race to the Top and No Child Left Behind, decreasing time spent on teaching content, core and noncore, is a challenge to any school system. This action research case study was designed to provide instruction in research-
based anxiety-reducing strategies in the classroom using just minutes of a class two times a week, the same amount of time used for a class warm-up or for students to get settled down and ready to learn.

School administrators play a vital role in promoting change that leads to success for their students and teachers. Introducing new programs can be a challenge for administrators who are always dealing with time and budget constraints. Teaching anxiety-reducing strategies in the classroom in just minutes can be a win-win initiative that does not get in the way of the required content. The anxiety-reducing strategies are free with just the cost of a few minutes, are research-based, and can enhance the learning of all students. The leader’s focus must be on empowerment, transformation, collective learning, and community involvement and support to be an effective change agent in schools. A leader can no longer hold an individualistic and non-systemic perspective but must believe in leadership that is distributed and celebrated among all stakeholders. A leader has to lead with passion, persistence, and a commitment to provide daily opportunities to empower every single student to reach his or her fullest capacity.

This study intended to gain knowledge of sixth grade students’ experiences using strategies that will go with the students outside of the classroom. The benefits could be life-long, utilized whenever they are in a situation or event that causes anxiety. This research explored if, by participating in this research, the students would become empowered, giving them tools to handle their anxiety, regardless of their age or situation. This study provided clear data that it is possible to empower school-age children and adolescents by teaching them anxiety-reducing strategies to utilize when they feel anxious about a situation. Though the intent was not for long-term benefits, the relief at
the moment can allow them to successfully maneuver through the current situation or event. The need for anxiety-reducing strategies as part of the curriculum is becoming more and more necessary for the mental health of children and adolescents today.

Educational policymakers, decision-makers, and curriculum personnel must look at the whole child and provide the supports and encouragement needed to increase achievement and well-being in our young people today. People who have a part in the supervision, well-being, and emotional growth of children and adolescents must recognize signs of anxiety and provide adequate supports in a setting that will reach the most children. By creatively embedding anxiety-reducing strategies into the curriculum, students, staff, and families will benefit and opportunities for future success will become a real possibility.

Post-Script

Six weeks after completing the data collection, I spent a few hours in the middle school observing classes in my capacity as an Assistant Superintendent of Curriculum. In those few hours, two sixth grade students and one teacher stopped me to talk about their experiences since introducing the anxiety-reducing strategies. One student shared:

Positive self-talk really helps me relax. But more than anything, it helps me before tests. I just say in my head, “I can do this, I just need to slow down and re-check my work” then I feel like I really can do it. I use “I am strong and capable” because that makes me feel like I really am strong and capable. I made one up, “Just get through it. If I try, I know I can.” I like that because it just makes me feel like I may struggle, but little by little, I can do it.

Another student later ran up to me, gave me a hug, and said:
I just did my presentation in social studies class. I used to get butterflies really bad and not know what to do but now I just do the breathing techniques and it makes me feel good and I got through my presentation!

A teacher who did not participate in the experiment stopped me as I was leaving the building. He shared a story of how one of his students who had been in the participation group taught the entire class how to do some of the muscle relaxation techniques before they took a large test. He mentioned how she had been very exact and detailed in her teaching, making sure her classmates knew the name of the techniques and modeling first before having the class do the exercise. After the test, she asked the class if they felt they did better because they were more relaxed. The class all showed their appreciation by positive comments and a few students clapped. One student nominated her as the class relaxer for the rest of the year. The teacher shared that the students have often asked to take a couple of minutes of class time to do a relaxation technique after that experience.

These students felt empowered to take control and not only helped themselves during anxiety-producing situations, but helped their peers and teachers use the strategies. “I will keep on doing these for the rest of my life!”
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doi:10.1177/1087054706286698


Health Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health and National Institute of Mental Health.


doi:10.1348/026151006X173288


Appendix A

Introduction of Research Project
Introduction of Research Project

Thank you so much for the opportunity to meet with you today. My name is Robin Buchler and I am the Assistant Superintendent for Mattawan Schools. I am here today, not as the Assistant Superintendent, but as a learner and an educator. I want to take a few moments to talk with you about something I am excited to try out and I need you to help during your Information Literacy class two days a week for the next five weeks.

Our world is changing every day and sometimes we feel ourselves becoming anxious about the changes and demands placed on us. We are asked to do more and more in school and at times, it can feel overwhelming.

Anxiety is a natural reaction and a necessary warning in our bodies. Many of the everyday experiences of school can increase stress and cause anxiety. Most of the time, it is very normal to feel anxious. It can become a problem when the anxiety increases to the point where it seems to take over every day experiences and causing uncomfortable feelings. It can even become serious when it is excessive, overbearing, and uncontrollable.

So what does anxiety feel like? Common feelings of anxiety are:

- worrying all of the time;
- panic attacks;
- misinterpretations of how you are really feeling;
- fears or anxiety about something that is happening or going to happen;
- negative and unrealistic thoughts;
- hypersensitivity to physical cues; and
- obsessive and/or compulsive behaviors.

Physical symptoms could include hands trembling, fast heart beats, sweating, nausea or abdominal discomfort, dizziness, hot flashes, chills, and difficulty breathing.

I am excited about having the opportunity to empower each of you to take control when you start feeling anxious by teaching you some easy, invisible, anxiety-reducing strategies. There are three strategies we will be learning: Progressive Muscle Relaxation, Deep Breathing, and Positive Self-talk. All of these strategies have been proven to help reduce anxiety so that you can feel better and do better in school and
outside of school. The question I am seeking to answer is “How do sixth grade students experience anxiety-reducing strategies that are embedded in their class?” I am hoping you can help me find the answer to that question.

Twice a week for about 15-25 minutes, I will come into your Information Literacy class to learn and practice these easy strategies. Mrs. Kay will also be helping by going through the exercises with you. You will also be keeping a journal of what you are thinking or feeling during this experiment. Even though I only get about five weeks with you, you may decide to continue these strategies whenever you are feeling anxious about anything.

You don’t have to worry about any risks but your help and participation will have many possible benefits. You will be taught how to quickly and quietly manage your anxiety and stress so you can reduce the risk of negative effects on your day-to-day experiences and/or long-term health concerns. Hearing how you experience these strategies will provide valuable information for educators and curriculum coordinators on how to educate and care for the whole child.

Thank you so much for your participation in this new learning. I look forward to working alongside you as we conduct this important research.
Appendix B

Brief Overview of Anxiety-Reducing Strategies CD
Brief Overview of Anxiety-Reducing Strategies CD

“Progressive Relaxation and Breathing” by Matthew McKay, PH.D. and Patrick Fanning, is an audio program that walks the participant through a complete introduction to the Jacobsen technique for progressive muscle relaxation and deep breathing exercises. The CD is broken into eight parts:

- Hands and Arms (4:46)
- Head, Neck, and Shoulders (5:44)
- Chest, Stomach, and Lower Back (3:35)
- Legs and Feet (7:44)
- Deep Breathing (3:42)
- Complete Natural Breathing (5:31)
- Energizing Breathing (4:30)
- Alternative Breathing (3:40)

During the beginning of the sixth grade English class, students will be led through two muscle sections and one breathing exercise each session. By the end of the week (two days a week, 15 minutes sessions) the students will participate in the full body progressive muscle relaxation exercises and will learn two breathing techniques to help reduce anxiety and stress.

Students will participate in these exercises while sitting in their seats or standing alongside their desks. Researcher will be observing on the side of the classroom. A behavioral interventionist will facilitate by playing the CD and participating in the exercises as a model of technique.
Appendix C

Positive Self-Talk Script
Positive Self-Talk Script

What do you say to yourself when you start to feel anxious? Do you know what to say to yourself before, during, and after the times you feel anxious? It is important to understand that what you say to yourself will have a huge impact on your ability to successfully handle anxiety and stress.

Is your self-talk self-defeating and negative? If it is, then you will be anxious and most likely, become more anxious as the activity or event continues.

Is your self-talk positive and encouraging? If it is, you will probably feel a sense of control and fly right through the event or activity that is causing stress.

Since what you say to yourself often determines how things turn out, it is very important that your self-talk is positive and truthful. It does not always matter if you actually believe in what you are telling yourself. The brain will believe what you are telling it and your body will react to fit what the brain tells it. Although you may not feel it right away, with time, patience, and practice, you will begin to notice a big difference in your ability to control your anxiety and you will feel a lot better during your day-to-day experiences.

Now, get comfortable in your seat. You may choose to shut your eyes or put your head down on your desk. Listen to the positive self-talk and repeat the phrases to yourself. Co-Investigator reads list of 12 Self-Talk for Anxiety and Panic phrases (see Appendix D).

Each of you will be getting a copy of these phrases to take home with you. You will find there are 2 or 3 of these phrases that work really well for you. Try repeating these phrases to yourself twice a day, in the morning and before bed. In a couple of
weeks, you will be surprised at the difference in makes in gaining control of your anxiety and stress.
Appendix D

Self-Talk for Anxiety and Panic
Self-Talk for Anxiety and Panic

Directions:

From the list below, choose the positive self-talk statements that you like best. Read these statements to yourself often to memorize them. Feel free to come up with your own. The more you say them to yourself, the easier they will be to remember when you need them.

A panic attack will not hurt me.

I no longer accept negative thinking as part of who I am.

When I notice negative thoughts coming into my mind, I quickly replace them with truthful, positive thoughts.

I am strong and capable.

I am in control of myself and the thoughts and choices I want to make.

I am allowed to be me without apology, guilt or shame.

I am proud of myself and my accomplishments, no matter how small.

I am calm, positive, confident and self-assured.

I am confident and I am getting stronger every day.

I am okay and doing well. I am healthy and strong.

I have the power to control the thoughts I want to think. If I don't like my thoughts, I can change them.

I choose thoughts that are encouraging and helpful to me.

Modified by Robin K. Buchler from © Sound-Mind.org
Free Anxiety Help Website
Appendix E

Instructional Plan
Instructional Plan

Pre-Questionnaire:

1. In the last couple of weeks, have there been times when you have felt anxious at school?
2. What did you do when you felt anxious during those times?
3. What else do you know about handling situations that make you feel anxious?

Session 1:

Time 10 minutes
Activity 1 Introduction of Researcher, Roles, and Study
Script (See Introduction Document Appendix)
(Investigator)

Time 5 minutes
Activity 2 Hand out journals
Script “These journals are for you to use as we work together on these anxiety-reducing strategies. They will give you a tool for capturing your thoughts and experiences. There are no rules and you may write or draw your responses. Sometimes, you will be given a question to answer. Other times you will be given a prompt. A prompt is the beginning of a sentence that you will be able to finish. You do not have to worry about spelling everything right or using the right words. Just allow yourself to write or draw what comes to mind while learning and using these strategies.”
(Investigator)

Time 10 minutes
Activity 3 First journal entry (Initial Data Point)
Script “After putting your name in the inside cover of your journal, turn to the first page and answer the three questions you see on the board. You may draw your response, add labels, or use words to explain your answer. If you have some time left, feel free to decorate the cover of your booklet to make it your own.”

1. “What do you know about anxiety?”
2. “What does your body do when you are anxious?”
3. “How does anxiety “look” like?”


(Investigator)

**Instructional Strategies:** Direct Instruction, Reflection, Using prior knowledge, Recall, Mind work, Communication of thoughts and feelings, Write/draw thoughts, Choices, K-W-L

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**Session 2:**

<table>
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<tr>
<th>Time</th>
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</table>
| Activity 1 | Progressive Muscle Relaxation – Hands and Arms (4:46 minutes)  
            | Deep Breathing (3:42 minutes) |

(Investigator)

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**Activity 2**  
**Script**  
"Stop and write something in your journal about what you just experienced. Remember, there are no rules to your writing. Just reflect on this new experience."

(Investigator)

**Instructional Strategy:** Modeling, Written Expression, Independent Writing, Experiential Learning, Reflection, Putting thoughts/feelings into words, Comprehension

**Observations:** “Look for’s” document/Seating Chart Document

(Investigator)  
Listen and Watch

(Teacher)  

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**Session 3:**

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<thead>
<tr>
<th>Time</th>
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<tr>
<td>Activity 1</td>
<td>Journal writing (Data Point)</td>
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</table>

(Investigator)

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**Activity 2**  
**Script**  
"Reflect on your writing or drawing from our last session. What would you add to what you wrote or drew? What thoughts have you had about our experiences since we met last?"

(Investigator)

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<table>
<thead>
<tr>
<th>Time</th>
<th>12 minutes</th>
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</thead>
</table>
| Activity 2 | Progressive Muscle Relaxation – Head, Neck, and Shoulders (5:44 minutes)  
            | Complete Natural Breathing (5:31 minutes) |
Instructional Strategies: Modeling, Independent (re)read and enhance writing from previous learning, Prior knowledge, Reflection, Editing

Observations: “Look for’s” document/Seating Chart Document

(Investigator)

Listen and Watch

(Teacher)

Session 4:

Time 12 minutes
Activity 1 Positive Self-Talk
Script “Another strategy that helps reduce anxiety is positive self-talk. What do you say to yourself when you start to feel anxious? Do you know what to say to yourself before, during, or after the times you feel anxious? It is important to understand that what you say to yourself will have a huge impact on your ability to successfully handle anxiety and stress.

Is your self-talk self-defeating and negative? If it is, then you will be anxious and most likely, you will become more anxious as the activity or event continues.

Is your self-talk positive and encouraging? It if is, you will probably feel a sense of control and fly right through the event or activity that is causing stress.

Since what you say to yourself often determines how things turn out, it is very important that your self-talk is positive and truthful. It does not always matter if you actually believe in what you are telling yourself. The brain will believe what you are telling it and your body will react to fit what your brain tells it. Although you may not feel it right away, with time, patience, and practice, you will begin to notice a big difference in your ability to control your anxiety and you will feel better during your day-to-day experiences.

Now, get comfortable in your seat. You may choose to shut your eyes or put your head down on your desk, or you may choose to quietly or silently read along. Listen to the positive self-talk and repeat the phrases to yourself.”

(Investigator)

Activity 2 Journaling (Data Point)
Script “Quickly write or draw your thoughts and feelings about your first experiences with positive self-talk.”
Looking at the list of the 12 positive self-talk phrases, circle two or three phrases which you like the best (pause while students read through and circle phrases). Now in your journal, explain why you chose the positive self-talk phrases you did.”

(Investigator)

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Time 8 minutes
Activity 3 Progressive Muscle Relaxation – Chest, Stomach, and Lower Back (3:35 minutes)
Energizing Breathing (4:30 minutes)

(Collaborating Investigator)

Instructional Strategies: Modeling, Direct instruction, Written expression, Summarize feelings and thoughts of experiences so far, Putting words to your thoughts, Articulation, Drawing

Observations: “Look for’s” document/Seating Chart document

(Investigator)

Listen and Watch

(Teacher)

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Session 5:

Time 12 minutes
Activity 1 Progressive Muscle Relaxation – Legs and Feet (7:44 minutes)
Alternative Breathing (3:40 minutes)

(Collaborating Investigator)

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Time 4 minutes
Activity 2 Journaling (Write questions on the board)
Script “On the board you will see two questions. In your journal, write a response to both questions. Remember, there are no rules to you writing and you may add drawings to explain your thoughts and experiences.”

1. Have you used the progressive muscle relaxation exercises you have learned so far? If not, have there been times in school when you could have used them?

2. Have you used any of the breathing exercises so far? If so, which breathing exercise technique did you use? If not, has there been a time this breathing may have helped?

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Time 5 minutes
Activity 3 Positive Self-Talk
Script
“Take out your copy of the positive self-talk phrases and follow along as I read the phrases. Remember, you can read these out loud, to yourself, or just close your eyes and listen.”

(Collaborating Investigator)

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Time  2 minutes
Activity 4  Journal writing (Data Point)
Script  “On the board you will see one more question. In your journal, write a response to this question. Remember, there are no rules to your writing and you may add drawings to explain your thoughts and experiences.”

1. Have you tried any of the positive self-talk phrases, either your own or the ones you learned? If so, do you use the phrases you picked out? If not, think of a time in the last few days when thinking positively may have helped.

(Investigator)

Instructional Strategies:  Modeling, Comprehension, Written expression, drawing, articulation of thoughts and experiences, Reflection, Application of new knowledge

Observations:
“Look for’s” document/Seating Chart document
(Investigator)
Listen and Watch
(Teacher)

Session 6:

Time  22 minutes
Activity 1  Progressive Muscle Relaxation – Total Body (21 minutes, 49 seconds)
(Collaborating Investigator)

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Time  3 minutes
Activity 2  Journal Writing (Data Point)
Script  “After doing this round of progressive muscle relaxation, compare how you feel right now to another time in your life. Write about that. You can use labels, words, or pictures to share your thoughts.”

(Investigator)

Instructional Strategies:  Modeling, Application, Evaluating, Synthesizing, Written expression, thoughts to words, Supporting classroom experiences with real life experiences, Reflection, Prior knowledge
**Observations:** “Look for’s” document/Seating Chart document

(Investigator) Listen and Watch

(Teacher)

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**Session 7:**

**Time** 3 minutes  
**Activity 1** Journal Writing (Data Point)  
**Script** “Think over your last week or so. Did you have a test? Did you have to do a presentation? Did you have to try something you have never done before? How did you feel? Did you use any of the strategies you have been learning? If so, which one? How did it make you feel? If not, why?”

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**Time** 10 minutes  
**Activity 2** Deep Breathing (3:42 minutes) and Complete Natural Breathing (5:31 minutes)  
(Collaborating Investigator)

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**Time** 5 minutes  
**Activity 3** Positive Self-Talk Practice  
**Script** “Turn to the person on your right and share your favorite positive self-help phrase. Now turn to the person on your left and share a second favorite positive self-help phrase.”  
(Collaborating Investigator)

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**Time** 5 minutes  
**Activity 4** Journal Writing (Data Point)  
**Script** “Wow, can you believe we have been hard at work for 4 weeks now? Take a minute and write something in your journal about your journey so far. I have written a few questions and prompts on the board to help get your thinking started. Feel free to use two or three of those or come up with your own.”

1. “What has helped me the most of the anxiety-reducing strategies is the ........ because…….”
2. “One time when I used one of the strategies was……..”
3. “What do you like best about the anxiety-reducing strategies? What don’t you feel comfortable with?”
4. “When do you feel you would use these anxiety-reducing strategies at school? If not at all, why?”

(Investigator)
**Instructional Strategies:** Modeling, Reflection, Application, Knowledge (Recall), Articulation of feelings and thoughts, K-W-L,

**Observations:** “Look for’s” document/Seating Chart document

(Investigator) Listen and Watch

(Teacher)

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**Session 8:**

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(Collaborating Investigator)

**Observations:** “Look for’s” document/Seat Chart document

(Investigator) Listen and Watch

(Teacher)

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(Collaborating Investigator)

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<td>Journal Writing (Data Point)</td>
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<tr>
<td>Script</td>
<td>“In five words or less, write how you feel right now. Add one picture. Think of another time in your life when you felt just like you do now. Write that down”</td>
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(Investigator)

**Instructional Strategies:** Modeling, Writing, Drawing, Reflection, Application

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**Session 9:**

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<td>Self-Talk journal</td>
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<td>Script</td>
<td>“We have been practicing these positive phrases for almost 5 weeks now. In your journal, write down two of the positive self-talk phrases you learned and one of your own that has worked for you.”</td>
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(Investigator)

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<tr>
<td>Activity 2</td>
<td>Deep Breathing with no CD</td>
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Script “We are going to practice the deep breathing without the CD. Remember how to do it? I will give you a few reminder prompts along the way, like in the CD. Let’s start”

(Collaborating Investigator)

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Time 6 minutes

Activity 3 Progressive Muscle Relaxation – Head, Neck, and Shoulders (5:44)

Script “We are going to do this exercise without the CD this time. I will give you a few prompts like on the CD. Ready?”

(Collaborating Investigator)

Observations: “Look for’s” document/Seating Chart document

(Investigator)

Listen and Watch

(Investigator)

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Time 10 minutes

Activity 4 Journal Writing (Data Point)

Script “This is our last week together. For today’s journal, I would like you to write whatever comes to mind when you think about these anxiety-reducing strategies and your experiences with them. You may add drawings, labels, or just use your words. Do not worry about spelling or correct grammar. Just write and share your thoughts.”

“Using your journal, write how you would handle stress differently today that you would have 5 weeks ago. Add three words that best describe this experience and end your journal with a picture of how you feel about this experience.”

(Investigator)

Instructional Strategies: Model, Knowledge/Recall, Expression of thoughts and feelings, Drawing, Writing, Summarizing, Evaluating

Session 10: (Longer session)

Time 10 minutes

Activity 1 Journal Writing (Data Point)

Script “Today is our last day together. We are going to spend about some time writing about our experiences and what we learned from this. This will help me help others who may struggle with anxiety and stress. What you share with may help other kids who did not have this opportunity to learn these anxiety-reducing strategies. Please look at the questions and prompts on the board. Be sure to respond to one through three. The fourth is your extra thought and comment.”
1. “What I liked the best about these strategies are….”
2. “I think I will use these strategies when….”
3. “Do you feel you are better able to control your anxiety and stress now than what you were before learning these strategies? Why or why not?”
4. Your thoughts or comments?

(Investigator)
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Time: 10 minutes
Activity 2: Choose of Body Relaxation/Deep Breathing

(Collaborating Investigator)
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Time: 5 minutes
Activity 3: Positive Self-Talk
Script: “Last time through. After today, you may take these phrases home to use whenever you want or need to. Pick out your favorites that help you the most and use them whenever you are feeling anxious.”

(Collaborating Investigator)

Instructional Strategies: Modeling, Summarizing, Writing, Drawing, Synthesis, Evaluation, Application, Experiential Learning

Observations: “Look for’s” document/Seating Chart document

(Investigator)

(Teacher)

Post-Questionnaire:

1. In the last couple of weeks, have there been times when you have felt anxious at school?
2. What did you do when you felt anxious during those times?
3. What else do you know about handling situations that make you feel anxious?
Appendix F

Coding Document
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**Evidence Categories:** At a specific time during anxiety-reducing activities (1 minute periods), the student was + (Engaged) 0 (Partial) - (Not Engaged)

**A seating chart document will be used to record data each session.**
Appendix G

Seating Chart
Seating Chart  _____ Hour

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Front of Room

Teacher’s Desk

Summary of Hour:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Appendix H

Consent Form
Western Michigan University  
Department of Education Leadership, Research, and Technology  
Principal Investigator: Dr. Patricia Reeves  
Student Investigator: Robin K. Buchler

Dear Parent and/or Guardian:

Your child will be participating in a new program entitled “Anxiety-Reducing Strategies in Classroom.” The students in the Information Literacy class will learn and practice three research-based anxiety-reducing strategies twice a week for a portion of a class. The three strategies are progressive muscle relaxation, deep breathing, and positive self-talk. These strategies are brief, easy, and invisible to anyone who is not aware of what the student is doing.

The purpose of the program is to provide our students with brief anxiety-reducing exercises in class. This program will only last for five weeks, two times a week during their Information Literacy class. Data will be collected to determine the usefulness of this program, especially during times that tend to increase anxiety for our students (i.e. before assessments, speaking in class, small group work, performances, meeting new people, keeping up with class work/notes, etc.). Part of the data collected will be thoughts and sharing of experiences by the students through journal keeping. There will be no identifying information on the data collected.

If you do not want your child’s data to be used during the analyzation of the program for possible future research, please check the box below, sign and date the form, and return the form to the school no later than Tuesday, February 5, 2013. If you have no objection to allowing your child’s data to be used for analyzation of the program or possible future research, you do not need to do anything. Thank you.

Child’s name: __________________________________________________________

I have read the form and know what the program is about.

( ) I do not want my child’s data to be used in the analyzation of this program.

Parent’s signature: __________________________ Date: __________________________

Phone number: __________________________________________________________

Return to: Mattawan Middle School Office
Appendix I

Pre-Questionnaire
Pre-Questionnaire

Your teachers are working together to learn more about when you feel anxious in school and what you do to when you feel anxious? To help us better understand, please answer the following three questions:

Teacher’s Name ___________________________ Hour: ______________________

1. In the past couple of weeks, have there been times in school when you have felt anxious? Briefly explain.
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

2. What did you do when you felt anxious during those times?
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

3. What else do you know about handling situations that make you feel anxious?
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
Appendix J

Post-Questionnaire
Post-Questionnaire

A few weeks ago, we asked you to think about times you felt anxious in school and how you handled those anxious situations. Now that you have had a chance to think about this, we would like to ask you those same questions again to see if you have anything to add to your answers.

Teacher’s Name


1. In the past couple of weeks, have there been times when you have felt anxious in school? Briefly explain.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

2. What did you do when you felt anxious during those situations? If nothing, why?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

3. What else do you know about handling situations that make you feel anxious?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Appendix K

Human Subjects Institutional Review Board
Letter of Approval
Date: October 2, 2012

To: Patricia Reeves, Principal Investigator
    Robin Buchler, Student Investigator for dissertation

From: Amy Naugle, Ph.D., Chair

Re: HSIRB Project Number 12-07-11

This letter will serve as confirmation that your research project titled “Anxiety-Reducing Strategies in the Classroom: A Case Study” has been approved under the exempt category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note: This research may only be conducted exactly in the form it was approved. You must seek specific board approval for any changes in this project (e.g., you must request a post approval change to enroll subjects beyond the number stated in your application under “Number of subjects you want to complete the study”). Failure to obtain approval for changes will result in a protocol deviation. In addition, if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

Reapproval of the project is required if it extends beyond the termination date stated below.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: October 2, 2013