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EFFECTS OF A GOAL-SETTING STRATEGY ON SECOND GRADERS' SELF-EFFICACY FOR A LISTENING TASK

DISSERTATION

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

By
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2002

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ABSTRACT

Recognizing the significant influence of self-efficacy beliefs on students' academic achievement, it is pertinent that classroom teachers have access to pedagogy that promotes enhancement of young students' sense of efficacy while their beliefs are still malleable. Promoting self-regulated learning by teaching learning strategies may be a means to this end. Although links between strategy use and efficacy beliefs have been examined in previous studies, most have involved older students or adults. The primary grades are a critical period for developing the social and cognitive skills that lead to future success or failure. The present study was designed to investigate the effects of using a goal-setting strategy on second-grade students' performance and self-efficacy for a listening task.

Students in 18 second-grade classrooms from six schools in a midwest suburban school district participated in the quasi-experimental study. Data were collected from 356 students over a six-week period of time. In this mixed-method investigation, the use of the learning strategy of goal setting was investigated as a potential factor for developing self-efficacy and self-regulated learning in young children. The goal-setting condition had three levels: student-set goals, teacher-set goals, and no goals. A listening comprehension task provided the focus for
strategy implementation. All students in the study received instruction on active listening strategies.

Both quantitative and qualitative data were gathered from the entire sample of students. In addition, nine students were interviewed on an individual basis, providing deeper insights into how individual children construe the information they receive and use it to make judgments about the potential for success in future performances.

Although students showed no significant improvement in overall performance, several factors may have exerted a negative influence, including the complexity of the task, temporal issues present at the time of the study, and difficulties associated with doing research in natural classroom settings. Despite their lack of improvement, students overall showed statistically significant improvement in their levels of general and specific self-efficacy.

Qualitative data indicated that even though all students did not seem to be acquiring new strategies, it may have been that the effects were not immediately evident. Individual students derived different levels of benefit from strategy instruction, depending upon their developmental status. Even when the children did not experience the benefits of the strategy on an immediate basis, their resiliency prevailed. They believed they had improved. Higher self-efficacy judgments tend to be self-fulfilling as students apply more effort and persistence to the task.
Dedicated to my parents,
whose very lives exemplified
a triumph over humble beginnings,
a model of persistence and perseverance,
and the joy that comes to those who wait.

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Although the writing of a dissertation is itself an isolated and lonely endeavor, the process that leads up to the written product rests heavily upon the shoulders of many. Without the guidance and support of a host of others, this document would not be possible. I am eternally grateful to those whose wisdom, expertise, assistance, and encouragement have kept me moving forward over the past five years.

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CHAPTER 1
INTRODUCTION

"The direction in which education starts a man will determine his future life." – Plato

Teachers of young children realize that their students exhibit a wide range of attitudes, behaviors, and performance from the very first day they walk through the classroom door. One of the most imposing tasks of teaching requires taking these individual differences into account to help each child attain his or her own optimal level of learning. Finding effective and consistent methods to expedite accomplishment of such a task is a major goal of educational research. Not only do we need to identify successful practices, but research suggests that we also need to implement them early in a student’s academic career if educators are to maximize the benefits.

The first few years of school are crucial for establishing beliefs about school and achievement. Experiences in the early school years lead students to develop self-beliefs that become increasingly stabilized as they confront more demanding work in higher grades. Perry and Weinstein (1998) emphasize the importance of the formative aspect of the early school years, kindergarten through third grade, saying they are “the window in which children build the foundations of successful school careers” (p. 178). It is during these years that children develop their personal theories of schooling, including beliefs about academic abilities, the nature of academic tasks, the application of
strategies for learning, and expectations for their own success, that influence their actions at school and either foster or impede academic achievement (Paris & Newman, 1990).

Although individual differences have multifaceted bases, including ability, background, personal and family expectations, environmental factors, and self-belief systems, over the past two decades one factor has been shown to mediate students’ behavior in a variety of contexts. That factor is the construct of self-efficacy. Self-efficacy refers to personal beliefs about one’s capabilities to learn or perform behaviors at designated levels (Bandura, 1986, 1997). Positive self-efficacy judgments have been shown to encourage students to select more challenging tasks, expend higher levels of effort, and persist longer at tasks when difficulties are encountered, thus raising achievement levels (Schunk & Zimmerman, 1997).

Closely intertwined with self-efficacy beliefs are processes whereby students become “masters of their own learning,” now referred to as self-regulated learning. From this perspective, Zimmerman (1990) contends that emphasis in teaching changes from analyzing students’ fixed learning abilities to helping students design personally initiated processes and responses for improving their ability and learning environments. According to Paris and Newman (1990), children’s enduring theories about school become motives for action. Successful academic achievement relies on students’ ability to control cognition, emotion, motivation, and their environment. Teachers need to help
students to transfer control from others to themselves in each of these areas and the earlier the better. Learning specific strategies may provide a tool to optimize young students’ ability to internalize such control.

Both self-efficacy and self-regulated learning appear to be potent factors that contribute to academic achievement. Perhaps it is in the intersection between these two constructs that we can find direction for increasing the odds of success for all children, starting in those critical first years of formal schooling. In the present study the use of a particular learning strategy, goal setting, was investigated as a potential mechanism for bringing about a positive bidirectional influence between self-efficacy and self-regulated learning.

Rationale for the Investigation

It is generally accepted that young children get caught up in self-confirming cycles in which high perceptions of competency are likely to produce high performances, while the opposite positioning can also hold true. The high performances confirm their initial expectations, leading to subsequently higher levels of performance (Skinner, Zimmer-Gembeck, & Connell, 1998). As efficacy is most malleable early in the learning experience (Bandura, 1977), what happens to young children in the first few years of school will lead them to develop self-beliefs that will become increasingly stabilized. In order to increase the odds of academic success for all children, it is important to facilitate a strong start early in the school experience to optimize the malleable period, thereby setting the upward spiral of expectations and performance into motion.
Although the importance of a good start in school for young children has been established and the contribution of positive efficacy beliefs and self-regulatory strategies documented, there is a proportionally small number of studies that addresses the development of self-efficacy and self-regulated learning in the primary grades (Murphy & Alexander, 2000). Researchers have studied the self-efficacy of adults (e.g., Gist & Mitchell, 1992), college students (e.g., Tuckman & Sexton, 1991), high school students (e.g., Pajares & Johnson, 1996) and upper elementary and middle-school students (e.g., Schunk, 1983, 1984, 1986), but there is a dearth of information on primary-aged students because efficacy beliefs are in an emergent stage for young children. Efficacy information can become instructive only through cognitive processing and reflective thought, capabilities not typically available to very young children without the support of adults (Vygotsky, 1978). Primary-aged children's relative lack of experience, lower levels of reflection, and inability to articulate their abstract beliefs contribute to the paucity of studies in children under third grade.

In addition, a rather sophisticated set of processes is needed for successful implementation of self-regulated learning, as described by Zimmerman and Martinez-Pons (1988). Developmentally, coordinating several of the necessary cognitive and metacognitive processes may well be beyond the limited abilities of very young children. Young children, however, may be capable of learning and implementing individual strategies that can eventually be incorporated into a more highly coordinated level of self-regulated learning. If so, it will be to their benefit to begin using such strategies as early in their careers as they are able. Zimmerman (2000) identified four
stages in the development of self-regulation: observation, emulation, self-control, and self-regulation. Providing opportunities for experiences at each of the stages in primary-grade classrooms would enhance the potential for furthering students' self-regulated learning behaviors as early as possible.

Zimmerman and Martinez-Pons (1986) proposed a list of 14 categories of self-regulated learning strategies used by high school students, some of which may be adaptable to younger students. Included in the 14 categories were the strategies of goal setting and planning, which appear to be important pieces of the self-regulatory cycle. From the social-cognitive perspective (Bandura, 1986, 1997), the basis of self-regulated learning is the interaction of learning strategies and self-efficacy. "When children use these strategies, they feel efficacious, which leads them to use additional strategies, and the cycle continues" (Grolnick, Kurowski, & Gurland, 1999, p. 4). Perhaps by isolating one strategy at a time and investigating its influence on young children's performance and self-efficacy, researchers can begin to make some determinations of ways to set the majority of young students on a path to academic success.

Self-regulated learning strategies are not in and of themselves recognized as crucial elements of instruction in many curriculums in the current social climate. The present study was proposed in a climate in which proficiency test scores were a primary concern to all constituents. It was thus critical that everyone, from administrators to classroom teachers to parents to students, believed that any student contact time related to the study would contribute to student learning in a way that supported the adopted curriculum and might ultimately enhance performance on proficiency tests.
Because listening is an essential skill in the primary grades and the ability to be a "good listener" is a critical component of academic achievement, a listening comprehension task was selected as the vehicle of the proposed study. It has also been acknowledged that listening is teachable (Hennings, 1979).

The scope of the present study required participation from students in 18 classrooms, in 30-minute sessions twice a week, over a six-week period of time at the beginning of a new school year. In order to gain access to 18 classrooms at this extended level in a test-oriented climate, it was necessary to present a strong case for the value that students would derive as a result of their participation. From my own emic stance as a second-grade teacher in the sampled district for 20 years, I understood the value that my colleagues placed on developing their students' listening skills as a critical precursor to successful academic achievement. My emic stance also provided an understanding of the high value placed on language arts and literacy development. These priorities are based on the district's Language Arts Graded Course of Study. A summary of the program goals for language arts instruction in the Course of Study begins with the statement that "Language is the vehicle of education" (p. 3). "Active listening skills," "comprehending," and "critical appreciation of literature" are important components of the language arts curriculum. The program objective most closely related to the current study states that "Students will develop strategies to construct meaning" (p. 30). The listening strategies that were subsequently developed were directly tied into the district's curriculum.
Purpose of the Study

Attempting to measure such an abstract concept as self-efficacy beliefs in young children is a slippery task at best. Earlier studies, however, have suggested that self-efficacy is already beginning to play a mediating role in students' academic performance by age seven or eight (Gaskill, 2000, 2001). There is a need to find fruitful ways in which teachers can promote positive development of self-efficacy beliefs in increasing numbers of students on two different levels. First, there is a need to demonstrate that second graders are capable of making accurate judgments of their efficacy given appropriate tasks. Second, there is a need to identify ways that can be used to scaffold students to increasingly higher levels of self-efficacy judgments for academic achievement.

Two previous studies conducted by the author (Gaskill 2000, 2001) provided preliminary evidence that both of these purposes can be accomplished. In the first study, it was found that teaching an organizational strategy improved students' performance on a memory task as well as increased their predictions for consequent similar tasks, promoting increasingly higher levels of achievement. In the second study, the teacher's use of attributional feedback, linking student progress to effort or ability, was investigated. Students who received attributional feedback chose to write their spelling tests using cursive earlier than students who received only reinforcement feedback. In both of these studies, increased student performance was interpreted to be based on
enhanced levels of self-efficacy judgments resulting from the treatment. The present study investigated another potential strategy for enhancing and measuring children's development of positive self-efficacy beliefs.

The purpose of this study was twofold: to investigate whether using a goal-setting strategy improved second-grade children's performance on a listening task and to examine whether the use of the goal-setting strategy enhanced their self-efficacy judgments for a listening task. Goal setting was selected because it has been shown in previous research to exert influence on even young children (Gaa, 1973; Bandura & Schunk, 1981). Studies on goal setting have been done in other academic domains, including mathematics (e.g., Schunk, 1983a, 1983b, 1983c) and spelling (White, Hohn, & Tollefson, 1997).

The goal-setting aspect of the study was not the direct focus of classroom instruction. That is, students were not taught how to set goals. Rather, in one condition they were asked to record specific goals set by the teacher. In another condition they were asked to record a goal that they had selected for themselves, using any criteria they wished. In a third condition, no mention was made of goals. All students involved in the study, however, received explicit instruction on the use of cognitive strategies for active listening. All participants thus received at least one type of strategy training, allowing for performance comparisons between groups based on equal amounts of instruction and practice with the active listening skills. Students in all conditions were assessed for pre- and post-study knowledge of listening strategies as well as for attributions to the use of these strategies for improved performance on the listening tasks, (i.e., answering...
questions about stories that were read aloud). The data collected allowed for analyzing students' ability to articulate acquisition of newly acquired strategies and their attribution of improved performance to the use of the strategies. As a result of participation in the study, all children received training in the skill of active listening and two-thirds of the children used goal setting strategies.

Research Questions

The study investigated the effects of a goal-setting strategy on students' listening skills and self-efficacy for a listening task. The overarching question was to ascertain whether developing an awareness and subsequent use of the goal-setting strategy is directly related to raising self-efficacy for a listening comprehension task by second graders. Two major aspects of the investigation were to determine if using a goal-setting strategy (1) increases children's listening comprehension for read-aloud stories, and (2) enhances children's efficacy for understanding and recalling aspects of a read-aloud story. The specific research questions of the study include the following:

1. To what extent does the use of a goal-setting strategy, either student-set or assigned, influence second-graders' performance on a listening task?

2. To what extent does the use of a goal-setting strategy, either student-set or assigned, affect students' self-efficacy for a listening task?

The present study utilized a combined quantitative and qualitative methodology design in an effort to derive a more complete understanding of the research questions. While the experimental component was designed to investigate causal relationships, the qualitative element rendered access to a deeper level of understanding to the
experiences of children. The qualitative evidence allowed us to investigate how student characteristics of gender, academic achievement, and school of attendance may have exerted unique influences on student performance or self-efficacy. It is through the voices of the children, their teachers, and their parents, that the numbers begin to “come to life” and substantiate what the numbers suggest. Only through the voices of the children themselves can we begin to understand how they make decisions, take charge of their own actions (or not), and adjust their self-beliefs in the process. If the results of this study are to be useful in furthering understanding of how to enhance each child’s sense of self as agent, then developing insights into how individual children construe the information they receive and use it to make judgments about the potential for success in their future performances is key.

Wilcox (1982) sees the classroom as an arena in which essential aspects of cultural transmission are revealed. Children and parents of minority cultures, whose first language was not English, were purposely included in the interviews in an attempt to hear the point of view of many layers of participants. Recognizing the focus on language that is involved in this study, it was useful to identify those outside of the “culture of reference” (Wilcox, 1982) and incorporate their views in an effort to truly begin to understand some of the differences between children.

The mixed-methods design of the study provided for collection of multiple forms of data to use in triangulation. Results of the completed study have the potential for meeting all three criteria set forth by Marshall and Rossman (1989) for significant
research. These include contributing to knowledge, providing usefulness and meaningfullness to the relevant policy arenas, and offering usefulness for practitioners.

Definition of Terms

The terms listed below are defined briefly relevant to the purposes of this study. More in-depth discussion of these terms is included as each is further elaborated in the review of literature.

Case study: Inquiry focused on the descriptions and in-depth analysis of a limited number of individuals. A case study involves both the process of learning about the “case” or individual and the consequent product of our learning (Stake, 1994). Its value lies not in the capacity to make generalizations about populations, but rather offers opportunities for “thick descriptions” of the meaning of human action (Geertz, 1983). According to Stake (1994), collective case study involves the joint study of a number of individual cases, who may be either similar or dissimilar, with each lending voice. They are selected because of the belief that “understanding them will lead to better understanding, perhaps better theorizing, about a still larger collection of cases” (Stake, 1994, p. 237).

Comprehensive listening: Generally, listening is the process used to convert spoken language and sound into meaning in the mind (Jalongo, 1996). As opposed to hearing, a physiological passive activity, listening is an active cognitive process (Fetress, 1999). In the Wolvin-Coakley (1988) listening taxonomy, comprehensive listening is differentiated from four other forms of listening, including discriminative, therapeutic, critical, and appreciative. The comprehensive listener strives to understand the message...
in order to retain, recall, and possibly use the information at a later time. Major variables that influence the listeners' comprehensive ability include memory, concentration, and vocabulary (Wolvin & Coakley, 1988).

**Goal orientation:** A set of behavioral intentions that determine how students approach and engage in learning activities (Meece, Blumenfeld, & Hoyle, 1988). Differences in student achievement have been explained by several sets of contrasting goal orientations, including mastery versus ability focused (Ames & Ames, 1984), learning versus performance (Dweck & Elliot, 1983), and task-involved versus ego-involved (Nicholls, Patashnick, & Nolen, 1985). The primary differences in each set refer to whether learning is "perceived and valued as an end in itself or as a means to a goal external to the task, such as gaining social approval, establishing superiority, or avoiding negative evaluations from others" (Meece et al., 1988).

**Goal setting:** The act of establishing a standard or objective to serve as the aim of one's actions (Schunk, 1986a). Goal properties, including specificity, proximity, and level of difficulty, impact the effects of goal setting on behavior (Bandura, 1988). According to Schunk (1986a), goal setting has been shown to motivate behavior as well as to inform people about their abilities. A sense of competence can be validated as children note their progress toward goals, thereby helping to sustain motivation. In this study with second graders, the particular goal will be the number of questions answered correctly after hearing a story read aloud.

**Self as agent:** Agency refers to acts done intentionally. The power to originate actions for given purposes is the key feature of personal agency (Bandura, 1997). Individuals
are simultaneously agent and object, said to be agents when they act on the environment but objects when they reflect and act on themselves. Agentic causation relies heavily on cognitive self-regulation and is “achieved through reflective thought, generative use of the knowledge and skills at one’s command, and other tools of self-influence, which choice and execution of actions require” (Bandura, 1997, p. 7).

**Self-efficacy:** Beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments (Bandura, 1997). Efficacy beliefs have been shown to influence the courses of action people pursue, how much effort they put forth, how long they persevere in the face of obstacles and failures, resilience to adversity, whether their thought patterns are self-hindering or self-enhancing, and level of accomplishment they realize. Efficacy can be both general or specific. In this study, students’ efficacy for the specific task of answering questions pertaining to a story read aloud in their classroom will be measured. A more general efficacy measure for listening tasks will also be used.

**Self-regulated learning:** The degree to which students are metacognitively, motivationally, and behaviorally active participants in their own learning process (Zimmerman, 1989b). Self-regulated learning theories attempt to form explanations for how individuals learn and achieve “despite apparent limitations in mental ability (as traditionally assessed), social environmental background, or in quality of schooling” (Zimmerman, 1989b, p.4), or fail to learn and achieve despite advantages in the same categories. Zimmerman (1989b) describes these assumptions, stating that
self-regulated learners (1) can personally improve their ability to learn through selective use of metacognitive and motivational strategies; (2) can proactively select, structure, and even create advantageous learning environments; and (3) can play a significant role in choosing the form and amount of instruction they need. (p. 4)

Zimmerman (1998) further emphasizes that "self-regulation is no longer viewed as a fixed characteristic of students but rather as context-specific processes that are selectively used to succeed in school" (p. 74).

**Self-regulated learning strategy:** Actions directed at acquiring information or skill that involve agency, purpose (goals), and instrumentality self-perceptions by a learner (Zimmerman & Martinez-Pons, 1986). Zimmerman & Martinez-Pons (1988) refer to strategies as patterns of thought and action that effective learners use as they become aware of functional relations between use of the strategy and social and environmental outcomes. Goal setting and planning were included in Zimmerman’s and Martinez-Pons’ (1988) list of 14 categories of self-regulated learning strategies used by high school students.

**Limitations**

One of the problems in self-efficacy research, according to Pajares (1996a), is a lack of clarity between self-efficacy and other motivational constructs. Conceptual forerunners of self-efficacy, including self-confidence, self-perceptions of ability, ability judgments, and confidence judgments, have their own definitions outside of Bandura’s social cognitive theory and are understood differently from other theoretical
camps. Pajares contends that the inability of the community of scholars to achieve "clarity of thought and expression, preciseness of word choice and meaning, and some consistency in its use of theoretical constructs" (p. 3) adds to the difficulty in understanding the role that specific judgments play. Indeed, based on the proliferation of possible related constructs dealing with the elusive self, one is left with the haunting question, "Is it really self-efficacy that I am measuring?"

A second problem discussed by Pajares (1996a) also relates to a limitation of the present study. According to Pajares, research on self-efficacy has been plagued by mismeasurement, often because of too global and general measurements. Advice for measuring self-efficacy requires "specificity of measurement, consistency with the criterial task, and microanalytic analysis" (p. 3) if the predictive power of self-efficacy beliefs is to be optimized. Although such criteria were expectations in the present study, there remains a nagging doubt as to whether they were met in a rigorous enough fashion to truly measure self-efficacy.

One of the most overarching notions in educational psychology today is that achievement-motivation constructs have little independence but exhibit a great deal of interrelationship (Murphy & Alexander, 2000). No construct can be successfully divorced from the myriad of other constructs that are constantly at work in and about an individual. Tweaking out one particular piece of the overall picture is at best semantic. There are always innumerable forces from social, contextual, developmental, and
personal perspectives that continue to be an integral part of each person's implicit and explicit behavior. Recognition and acknowledgment of this limitation must accompany the present study.

Pintrich and DeGroot (1990) claimed that different classroom settings, such as cooperative—competitive, ability grouped—ungrouped, may create differences in students' motivational orientations and self-regulated learning. Other features including classroom climate, management procedures, teacher efficacy, and general level of academic performance differ from setting to setting. When conducting research in natural classroom contexts, control over such extraneous variables is necessarily diminished. Goal-setting studies that have been conducted in natural classroom settings (Sagotsky, Patterson, & Leppert, 1978; Shih & Alexander, 2000) confirm that results were confounded. Although this possibility created another limitation for the present study, a strong conviction to the value of research in actual classrooms remains.

Finally, the present study was conducted in one upper to middle class midwest suburban school district. Results may be very different in other regions or school settings. Students from other regions may respond differently than the students who participated in this study. Generalizability is limited to second graders in the particular suburban school district represented by the participants in this study.
CHAPTER 2
REVIEW OF RELEVANT LITERATURE

"Knowledge is power." Francis Bacon

Overview of the Chapter

The past two to three decades have produced important new lines of research in the field of educational psychology. Self-efficacy and self-regulated learning are included among the relatively new constructs. The purpose of this review is to create a theoretical framework that will serve as a foundation for understanding the context within which the current study is situated, along with providing further explanation of the need for the present study and a basis for decisions made concerning methodology. Although the bulk of the review comes from educational psychology, literature from developmental psychology and social psychology is incorporated when applicable.

The review incorporates four general areas of relevancy to the study. First, an in-depth investigation of the relevant literature on self-efficacy is presented. Second, a general overview of theories on cognitive development is included as a guideline for understanding young children's cognition. Self-regulated learning is then discussed, followed by reviews of literature on a specific self-regulated learning strategy, goal setting. Finally, a discussion of listening as relevant to the classroom setting, along with a review of suggestions for teaching listening strategies, concludes the literature review.
Self-Efficacy

Traditionally, the value of self-confidence has enjoyed an established acceptance in many diverse fields, including education. Teachers have either suspected or recognized the importance that beliefs such as confidence play in their students' academic performance. Less than thirty years ago, the work of Albert Bandura (1977, 1986, 1997) provided a refinement of the concept of self-beliefs and solidified the basis for the distinctive use of the term self-efficacy as differentiated from other more general self-schemas. Bandura's (1977) clinical work with persons affected by snake phobia served as an initial source of documented evidence of the powerful predictive quality of self-efficacy judgments. Bandura and Adams (1977) found self-efficacy to accurately predict 85% of the approach behavior tasks completed by the phobics, as they either persisted or quit at various points along the way on a set of behavioral tasks ordered by level of difficulty. The implications of this finding spawned research on self-efficacy in cognitive, health, clinical, athletic, and organizational functioning. It has encompassed such diverse areas as pain tolerance, athletic performance, smoking cessation, and academic achievement. The areas of particular interest for educators are those of efficacy for cognitive skill acquisition and efficacy for self-regulation.

The focus on cognitive or academic related tasks should not be confused with the cognitive nature of self-efficacy in general. All self-efficacy judgments are cognitive appraisals. Self-efficacy beliefs are formed as a result of the cognitive process of constructing beliefs about one's ability to perform a specific task at a given level.
based upon available sources of information. These beliefs are "the product of a complex process of self-persuasion that relies on cognitive processing of diverse sources of efficacy information conveyed enactively, vicariously, socially, and physiologically" (Bandura, 1993, p. 145).

It is not the actual level of competence that comprises self-efficacy judgments, but rather the perceptions one has concerning the capability to be successful in a specific task. Studies such as one conducted by Bouffard-Bouchard, Parent, and Larivee (1991) confirm this allegation. In their study, junior- and senior-high school students with higher efficacy beliefs were more successful at solving math problems than students with lower efficacy beliefs, even though their levels of skill development were comparable. The self-perceptions of the higher efficacy students played a mediating role between their actual capabilities and their performance by increasing their control of time, levels of persistence, and accurate problem-solving decisions. In other words, according to Bouffard-Bouchard et al. (1991), "when the time comes to solve the task, this perception of reality, more than reality itself, will determine and promote sustained achievement motivation and behaviour" (p. 160). Student efficacy perceptions mediate behavior in two ways, both as a motive to learn and as a subsequent outcome of attempts to learn (Schunk, 1991).

Related Concepts

There are various self-referential theories, similar in their conceptualization to self-efficacy, that must be clearly distinguished in order to alleviate confusion. According to Pajares (1997), problems occur as the result of researchers either using the
terms synonymously or not making the conceptual differences clear. But self-efficacy is distinct from other conceptions of self, such as self-concept and self-esteem, and from similar phenomena, such as locus of control and outcome expectancy. Specific comparisons between these four are provided.

**Self-concept.** While self-efficacy is "a context-specific assessment of competence to perform a specific task" (Pajares, 1997, p. 15), self-concept is a "global construct comprising self-efficacy and other aspects of the self" (Schunk, 1991, p. 212). According to Marsh, Walker, and Debus (1991), the difference between self-concept and self-efficacy is in the "frame of reference effects." Self-concept is developed as a result of external and internal comparisons, using others or aspects of the self as frames of reference, whereas a judgment of self-efficacy focuses on the ability to successfully accomplish a particular task with no need for frames of reference. Self-efficacy and self-concept are not necessarily interrelated. It is possible to feel highly efficacious for a specific task such as spelling correctly but still not have a positive self-concept. Conversely, a student could have a positive self-concept but not feel efficacious about spelling ability. In addition, while efficacy beliefs are highly predictive of behavior, self-concept has weaker predictive power (Bandura, 1997).

**Self-esteem.** "Perceived self-efficacy is concerned with judgments of personal capabilities, whereas self-esteem is concerned with judgments of self-worth" (Bandura, 1997, p. 11). Some researchers differentiate between self-concept and self-esteem in terms of function, "with self-concept performing a descriptive function and self-esteem an evaluative one" (Pajares, 1997, p. 40). Others include self-esteem as a dimension of
self-concept (Shavelson, Hubner, & Stanton, 1976). According to Bandura, self-esteem is not a global belief as different self-esteem judgments may be derived from multiple sources, including work, family, school, recreational pursuits, and social life. The importance people attribute to these areas varies and it is possible to derive different levels of self-worth according to beliefs. For example, a student may value himself highly (have high self-esteem) when playing sports, but not when performing in the classroom.

As with self-concept, there is no direct relationship between self-esteem and self-efficacy. It is possible to feel highly efficacious in one area and still not have a high level of self-esteem, or vice versa. "Self-esteem usually is considered to be a trait reflecting an individual's characteristic affective evaluation of self (e.g., feelings of self-worth or self-liking). By contrast, self-efficacy is a judgment about task capability that is not inherently evaluative" (Gist & Mitchell, 1992, p. 185). Compared to the highly predictive power of self-efficacy for goal setting and performance attainments, self-esteem is predictive of neither, as found by Mone, Baker and Jeffries (1995).

Locus of control. Rotter's (1966) locus of control scheme is frequently taken to be the same phenomenon as self-efficacy, although measured at different levels of generality. Bandura (1997), however, makes a clear differentiation between the two. In his explanation, locus of control refers to the beliefs about whether actions affect outcomes, while perceived self-efficacy refers to beliefs about whether one can produce certain actions. In addition, locus of control is an omnibus measure that is either weak or nonpredictive of behavior compared to the highly predictive nature of self-efficacy.
According to Tschannen-Moran, Woolfolk Hoy, & Hoy (1998), "Rotter's scheme of internal-external locus of control is basically concerned with causal beliefs about the relationship between actions and outcomes, not with personal efficacy" (p. 210).

According to Weiner’s Attribution Theory (1979), people attribute their successes and failures to causes represented along the three dimensions of internal or external to the individual, stable or unstable over time, and controllable or uncontrollable by the individual. Effort and ability are both generally viewed as internal attributes. People with an internal locus of control believe that their actions can determine outcomes and thus they are more active. People believing that outcomes are due to external factors such as luck, chance, or fate tend to be apathetic and often display learned helplessness. The adoption of internal control beliefs, however, does not guarantee enhancement of self-efficacy. Internal control beliefs can be either demoralizing or empowering, depending on one’s perceived self-efficacy to produce the required behavior. A sense of causative power is reached only when a person has both the belief that outcomes are dependent on his or her actions and the efficacy to perform the task successfully.

Outcome expectancy. In a similar vein to the locus of control discussion, Bandura (1997) emphasizes the distinction between a performance and an outcome, with a performance referring to an accomplishment, and an outcome being that which follows a performance. In making this important distinction, Bandura (1997) states that “behavior and the effects it produces are different classes of events. The latter can be used to inform the former” (p. 23). Stated in another way, self-efficacy is viewed as a
judgment of one's ability to execute the performance, whereas the outcome expectation is seen as a judgment of the likely consequences of that performance. As with other self-belief systems, there is no single relationship between efficacy beliefs and outcome expectations. If outcomes are highly contingent on quality of performance, individuals' anticipated outcomes depend on their self-efficacy to perform in the given situation. Highly efficacious people will expect positive outcomes, whereas those with low self-efficacy will have low expectations. People rely on their self-efficacy judgments in deciding which activities to pursue, avoiding those which they believe they cannot successfully perform while actively pursuing those which they believe they can manage successfully. Action will be taken when they hold both the efficacy beliefs and the outcome expectations that make the effort seem worthwhile (Bandura, 1997).

The number of expectancy constructs found in the literature is daunting. Pajares (1997) provides a lengthy list, including: task-specific self-concept, self-concept of ability, expectancies, expectancy beliefs, expectancy for success, performance expectancies, perceptions of competence, perceptions of task difficulty, self-perceptions of ability, ability perceptions, perceived ability, self-appraisals of ability, perceived control, subjective competence, and, of course, confidence. More empirical investigation is necessary if one conceptualization is to emerge or to determine if the different expectancy constructs actually play differing roles. Pajares (1997), however, believes that findings lean toward the superiority of self-efficacy beliefs over other perceptions of competence or self-concept beliefs as predictors of related academic outcomes. As Graham and Weiner (1996) stated,
what cannot be disputed is Bandura’s argument that self-efficacy has been a much more consistent predictor of behavior and behavior change than any of the other closely related expectancy variables. Efficacy beliefs have been related to the acquisition of new skills and to the performance of previously learned skills at a level of specificity not found in any of the other motivation conceptions that include an expectancy construct. (p. 75)

With such robust acknowledgement of the power of self-efficacy beliefs, the question of how these beliefs are derived becomes of great interest. Again, the work of Bandura provides the answer.

Sources of Self-Efficacy

Bandura (1977) listed four major sources of efficacy information that have remained constant, at least in conception if not in terminology, since that model was proposed. There are four principal sources of information from which efficacy beliefs are constructed at any age across the life span. Bandura’s original list included performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal. Today these sources are stated slightly differently: (1) enactive mastery experiences or performance accomplishments that serve as indicators of capability; (2) vicarious (observational) experiences that provide comparison with the attainments of others; (3) verbal persuasion and other forms of social influence that convince people that they possess certain capabilities; and (4) physiological and affective states from which people make capability judgments (Bandura, 1997; Schunk, 1991).
Mastery experiences. Of the four sources of efficacy information, enactive attainments or mastery experiences are the most powerful “because they provide the most authentic evidence of whether one can muster what it takes to succeed” (Bandura, 1997, p. 80). Simply stated, “success raises self-efficacy; failure lowers it” (Pajares, 1996a, p. 2). The issue is more complicated than that, however. It is not the performance per se that affects efficacy, but rather the cognitive processing of the information derived from the performance.

Many factors complicate the formation of efficacy judgments, even when a performance has been successfully completed. If the success is perceived as a result of external assistance or due to an easy or unimportant task, efficacy will not be enhanced. Likewise, if large amounts of effort are required to complete a task successfully, efficacy beliefs for repeating the performance may be lowered (Bandura & Cervone, 1986). Due to early malleability, successes or failures early in the learning experience will have more impact on efficacy judgments than occasional successes or setbacks once beliefs have become more stabilized (Bandura, 1997). The same performance may either raise, lower, or leave unchanged a person’s efficacy beliefs depending on interpretations made in that situation.

Vicarious experiences. The second source of efficacy information is vicarious experience, or the effects of observing models perform similar actions. Observational experiences provide comparison with the attainments of others and are more influential to the extent that the observer identifies with the model. When the observers see someone similar to themselves perform successfully, their efficacy for the task typically
increases because they believe they, too, have the ability to master comparable activities (Bandura, 1997). The most useful comparative information for judging one’s own capabilities comes from models who are either similar or slightly higher in ability (Bandura, 1997).

Although mastery experiences are generally acknowledged as the most influential source of efficacy beliefs in adults, in a study of sixth graders Keyser and Barling (1981) found the children to rely more heavily on modeling and to connect efficacy beliefs less with performance attainment than expected. In a study of efficacy accuracy in nine-year-olds, Schunk (1981) found that modeling resulted in higher predictions of efficacy than did didactic treatments. Pajares (1997) pointed out that people are more sensitive to vicarious experiences when they are uncertain about their own abilities or have limited prior experience, which may help to explain why younger children rely so heavily on modeling cues.

Verbal persuasion. Although verbal or social persuasion is a weaker source of efficacy information than mastery attainments or vicarious experiences, this source of efficacy derivation is useful if the envisioned success is actually attainable (Pajares, 1997). Children easily see through empty praise, but sincere persuasion can encourage and empower if the necessary skills to perform the task are available (Brophy, 1981). The trustworthiness, expertise, and credibility of the persuader are important factors taken into consideration in determining the potency of verbal persuasion. Bandura (1986) cautioned that it is often easier to weaken self-efficacy beliefs with negative
persuasions than it is to encourage and empower through positive persuasions. It is important to be reasonably certain that success is attainable prior to providing verbal persuasion.

Physiological states. People often “gauge their confidence by the emotional state they experience as they contemplate an action” (Pajares, 1997, p. 6). Aversive thoughts and fears can lower perceptions of capability and then actually help produce an inadequate performance. Anxiety, stress, arousal, fatigue, and mood states serve as indicators of emotional states people have created. The interpretations made through cognitive processing of these states may lead to different perceptions of one’s abilities. While moderate levels of arousal may help to focus attention and energy, high levels can be an interference. Whether somatic indicators such as increased heart and respiratory rate, sweaty palms, or trembling hands are interpreted positively or negatively depends on the circumstances, personal history, and the overall arousal level (Tschannen-Moran et al., 1998). Pajares (1997) warned that while the typical anxiety associated with an important endeavor is not necessarily a cue to low self-efficacy, strong emotional reactions may be an indicator of one’s expected outcome for the performance.

Each of the four sources of efficacy derivation has the potential to influence the personal judgments made by individuals in varying proportions in different contexts. Cognitive representations are adjusted through cumulative experiences. Even so, it is
always the person’s own interpretation of the relative success or failure that provides the source of influence. It is important to remember that “memory is a reconstruction of the past, not simply a reproduction of it” (Bunge, 1980).

**Effects of Self-Efficacy**

Perhaps the key feature of the potency of self-efficacy lies in the manner in which it contributes to an individual’s sense of self as agent. Personal agency lies in the power to originate the necessary actions for specific purposes (Bandura, 1997). The self-beliefs that people hold are instrumental in determining just how they exercise control over the different events in their lives. Personal beliefs of competence have specifically been shown to exert influence over the choices people make, the amount of effort they expend, how long they persevere in the face of obstacles, and the resilience they show in adverse situations (Pajares, 1997).

**Choice.** People tend to engage in tasks for which they feel competent and confident, while avoiding those for which they have little sense of competence. The choices they make create a set of experiences that move them toward particular trajectories. For example, students who have high levels of efficacy for academic tasks tend to select college preparatory courses that eventually lead them to careers that differ from students who do not attend college. When people have a strong sense of efficacy, they also tend to select more difficult tasks as challenges to be mastered rather than as possibilities for failure. People with a lower sense of efficacy may believe that tasks are
more difficult than they really are and develop stress, depression, or limited views of how to proceed, as opposed to efficacious people who tend to feel more serenity when approaching challenging tasks (Pajares, 1996a, 1997).

Effort, perseverance, and resilience. Once task selection has been made, efficacy beliefs continue to impact performance through the levels of commitment to success brought to the task by the individual. People who believe in their ability to solve a problem, for example, are more likely to heighten their efforts when necessary, keep trying when obstacles are encountered, and recover from temporary setbacks. According to Pajares (1997), “the higher the sense of efficacy, the greater the effort, persistence, and resilience” (p. 7). These tenacious behaviors lead to higher levels of success which in turn raise subsequent efficacy levels, and a positive spiral is established. The impact of these strong determinants on individuals’ level of accomplishment serves as the basis for Bandura’s (1997) allegation that beliefs of personal efficacy constitute the key factor of human agency.

The sources and effects of self-efficacy beliefs have been well-documented over the past twenty-plus years. The majority of this research has been done in the study of self-efficacy of adults, college and high school students. Some studies have investigated the same issues in upper elementary and middle-school students. Bouffard-Bouchard et al. (1991) indicated that the superior performance of highly efficacious students may be related to better self-regulatory activities. Further research investigating the relationship between self-efficacy, self-regulation, and performance was suggested. Additionally, they advised that future studies should examine the development of self-efficacy of
students younger than the junior high and high school students in their study and assess its relationship to self-regulation and performance. Little research is available, however, on the influences of self-efficacy on younger children.

Self-Efficacy Studies of Young Children

In one of the few studies to investigate self-efficacy of children in second grade, Wang and Richarde (1987) compared pretest-posttest ratings of students' self-efficacy for a paired-associate task. In this developmental study, differences between second and fourth graders were noted. Students of both grades were taught an elaborative learning strategy to enhance performance on a paired-associate task. While second graders benefited from the learning strategy and showed gains in self-efficacy, their successful performance did not generalize to similar tasks in the way that fourth graders' did. Results led the authors to conclude that the gains in self-efficacy for the second graders may have been due to the familiarity effect inherent in pretest-posttest designs. A positive implication of the study is that providing opportunities for children to participate in familiar tasks is likely to increase their efficacy for that task, thereby invoking the positive behaviors associated with a high sense of efficacy.

Stednitz (1985) examined the influence of educational enrichment on self-efficacy of children aged four to six of both sexes and with varying intellectual abilities. Results from this study differed from previous studies and indicated that not only does school-related self-efficacy exist in children this young, but that the efficacy levels are stable. Using a five point Likert-type rating scale of smiley faces (Schunk, 1982), the
four-year-olds in this study also tended to use more low-self ratings (sad faces) than the older children, again contradicting earlier suggestions that younger children are more optimistic about their performances (Nicholls, 1978).

Collins (1982) gave difficult math problems to children who considered themselves to be of high or low efficacy at each of three levels of mathematical ability. She found that students with higher levels of efficacy performed better than their less efficacious counterparts at each of the ability levels, giving rise to the interpretation that lack of efficacy to use acquired skills is as detrimental as not having the skills in the first place.

Gaskill (2000) investigated the mediating effects of learning a memory strategy on second-grade students' performance of a memory task and their resultant self-efficacy for the task. In a sample of 40 second graders, half were taught a strategy for organizing words into categories to increase their ability to remember lists of words. Predictions of how many words students would subsequently remember were taken as a measure of self-efficacy for the task. The trained students outperformed their untrained counterparts on the memory task, demonstrating a high level of use of the sorting strategy. They also predicted higher levels of future performance, indicating that their efficacy for the task had increased.

The majority of studies of self-efficacy of young children have been conducted by Schunk, with few using subjects as young as second grade. Schunk examined effort and ability feedback with seven to ten-year-olds (1982) and with third graders (1983a);
reward contingencies (1983b) with eight- to eleven-year-olds; goal setting (1986a) with fourth and fifth graders; learning goals and reading comprehension (Schunk & Rice, 1989) with fourth and fifth graders.

Although little research has directly examined the development of efficacy beliefs in primary-grade students, studies in developmental psychology provide insights about factors related to the emerging cognitive abilities that are necessary for making efficacy judgments. Because it is obvious that much has happened in the lives of children by the time they arrive at the classroom door, it is useful to consider these early developmental aspects of self-efficacy before considering specific issues related to primary-aged children.

Relevant Issues in Cognitive Development

First graders begin their schooling with a naïve and undeveloped set of self-beliefs, and are therefore in a malleable stage in their development of efficacy for cognitive learning. Their extensive differences in experience and abilities have already begun to shape their future learning opportunities and outcomes. Some of these differences have come about as a result of family experiences and expectations, social opportunities such as preschool attendance and other community resources, and innate differences in ability and disposition. Regardless of the individual differences inherent in young students, theorists propose that children generally advance in consistent ways.

Related Theories of Development

A brief look at the perspectives of some social and developmental theories provides a framework for understanding how children's cognitive development occurs.
in general. Although these perspectives have typically been discussed in terms of their differences, taken together the theories provide a richer picture of the crucial cognitive and psychological growth that must have transpired before the capacity for making self-efficacy judgments is reached.

**Erikson.** In Erikson’s psychosocial view of personality development (Erikson, 1963, 1968), both internal psychological factors and external social factors are important contributors to differences among individuals. According to Erikson, regardless of differing cultures, all human beings follow similar developmental paths through a series of interdependent stages. Every child must resolve the particular psychosocial crisis at each stage before going on to the next level. Successful resolutions result in a personality strength, or *virtue*, that will facilitate future healthy development; unhealthy resolutions can have potential negative repercussions throughout life.

Successful resolution of Erikson’s earliest stages of *trust* (birth to 12-18 months) and *autonomy* (18 months to three years) should be deemed pertinent precursors for future positive self-beliefs. The *initiative versus guilt* (three to six years) and *industry versus inferiority* stages (six to twelve years) are in operation prior to and during the early school years. The types of interactions children have with adults are critical during the initiative versus guilt stage. Providing respectful supervision when children are beginning to explore new activities and purposefully achieve tasks can lead to the development of the virtue of *purpose*. Children who are not allowed to try things on their own, or who are belittled or ridiculed for their imperfect attempts, may develop
feelings of guilt that inhibit further initiative. According to Erikson, when children enter school during the industry versus inferiority stage, the virtue of competence results as they begin to believe in their ability to successfully cope with academic and social skills. Feelings of inferiority may develop in children who experience difficulty with these challenges.

Vygotsky. From the Vygotskian perspective, social-cultural-historical influences play a major role in the development of a child’s cognitive skills. Vygotsky’s (1978, 1987) views do not discount the presence of maturational factors, but rather suggest that natural and cultural lines of development coincide and merge into each other. Vygotsky’s theory is based on a ‘coconstructionist’ development of higher mental functions that develop as a result of social interactions. In contrast to Piaget’s (1954, 1963, 1970) belief that certain developmental stages must be reached before learning can take place, Vygotsky claimed just the opposite—“that instruction is only useful when it moves ahead of development” (Vygotsky, 1987, p. 212). Dialoguing with adult partners in children’s “zone of proximal development,” the difference between what a child can do independently and what can be accomplished with adult help, facilitates advancement to increasingly higher levels of psychological functioning. Vygotsky’s theory is perhaps best summarized in his statement that “Learning awakens a variety of developmental processes that are able to operate only when the child is interacting with people in his environment and in collaboration with his peers” (Vygotsky, 1978, p. 90).

Piaget. Social influences were not considered central in Piaget’s theory. Rather, Piaget (1954) identified four major stages of cognitive development that all individuals
go through in order, based to a large extent on maturation, in their attempts to make sense of the world. The transition from the preoperational (two to seven years) to the concrete operational (seven to eleven years) stages typically occurs during the primary school years, creating a major turning point toward more logical, flexible, and organized thinking. Although Piaget's contributions to an understanding of cognitive development have had a substantial influence on early childhood education, major criticisms have been leveled at the theory's ultimate accuracy. In a specific investigation of tasks at the preoperational and concrete operational stages, Gelman and Baillargeon (1983) cite examples of preschoolers being able to perform tasks previously considered to be beyond their means, while older students were not successful in tasks they were expected to be able to do. While supporting some of Piaget's premises, this research also presents evidence that not all preschoolers are truly egocentric and that training can be useful for improving conservation and other tasks, thereby helping to dispel the notion that development occurs in lock-step stages that are very different from each other. A major criticism that arises for Piaget's theory is that "the young know more and that the old know less" (Gelman & Baillargeon, 1983, p. 211) than originally suggested.

Bandura. Although not a developmental theorist, Bandura's body of work pertains to the current discussion. Bandura's theory of "triadic reciprocal determinism" stresses the bidirectional influence of social, personal, and behavioral determinants, as shown in Figure 1.
Bandura's view is that while social determinants develop largely as a result of observation, cognitive capabilities mediate the observer's subsequent development and actions. Thus, biology and maturation also play a role in cognitive development as "social influences can only operate within the constraints imposed by the 'hard wiring' of the psychological system at its current level of maturation" (Tudge & Winterhoff, 1993, p. 70).

Two of the above theories that appear to be most influential in the development of self-efficacy beliefs in young children are the theories of Vygotsky and Bandura because of their emphasis on the social aspect of development. Vygotsky's social constructivism provides a theoretical base for Zimmerman's stages of self-regulatory development, (i.e., observation, emulation, self-control, self-regulation). Observation is an inherently social activity requiring performance by others. Learners are scaffolded to higher levels of self-regulatory behavior by first observing others, and then emulating them. Such are the vicarious experiences, frequently accompanied by verbal persuasion,
recognized as potential sources of self-efficacy information. The individual’s interpretation of his level of mastery on his own attempts then provides the basis for efficacy judgments.

Bandura’s social cognitive theory expands the personal and behavioral factors to include environmental factors as well. In the classroom setting, Bandura’s theory seems to be particularly relevant as environmental factors make a heavy contribution to students’ opportunities to encounter positive mastery experiences and vicarious experiences, receive positive verbal persuasion and maintain favorable physiological states. Self-efficacy judgments then, though individually formed based on individuals’ cognitive interpretations of the four factors that serve as sources, are inexorably interwoven into the context in which the individual operates.

Recognizing that there are differences from theory to theory, it can also be seen that the theories share similarities in their acknowledgment that both social interactions and maturation play a role in children’s cognitive growth. Because the ability to make self-efficacy judgments rests entirely on a cognitive base, an examination of self-efficacy development must consider both the contextual and individual factors that can facilitate such growth.

Influential Developmental Factors

Contextual and individual factors associated with social interaction and maturation are inexorably intertwined. Some of the more relevant and critical factors are associated with aspects of parenting, peer influences, and innate individual differences.
Parental factors. Parental influences begin even prior to birth. From their infants' first days, parents establish the particular setting in which each infant will be nourished and nurtured, physically, emotionally, and cognitively. Parents have the opportunity, perhaps an obligation, to do everything in their power to provide the most conducive setting possible. What parents do to provide optimal levels of appropriate responsiveness, opportunities for development of autonomy, as well as cognitive advantages, is instrumental in determining how the child interprets the cues and eventually derives self-beliefs. Informed parents have an advantage they pass along to their children. Discovering ways to expand the base of informed and efficacious parents should be a goal of future research.

In the past few decades, the traditional view that an individual's ability was innate and fixed has given way to views that socio-cultural influences, particularly those of the mother or other primary caregiver, have an impact on intellectual development (Lewis & Goldberg, 1969). Lam (1997) distinguishes between two research paradigms for investigating how families affect children. The first is that of "family status" and refers to the conditions of families, including such features as family structure, ethnic background, socioeconomic status, and family size. The second paradigm, "family process," centers on parenting styles, discipline, and engagement in education. While Lam integrates the two paradigms in her work, Dornbusch and Wood (1989) argue for the latter, saying that "the generalizations are not limited to an ethnic group, a period, or
a community” (p. 68). They believe that family processes are more important than
family status, and identification of specific processes that are beneficial is a useful
endeavor in fostering children’s academic achievement.

Recognizing that the two paradigms are naturally interwoven and that family
status does have its undeniable influences, both directly and indirectly, family processes
that lead to improved levels of perceived control, competency, and autonomy beginning
in infancy should be key factors. Bronson (2000) lists several specific parental
behaviors that have been associated with motivation for control and mastery in children
prior to school age. They include: relating to children in caring and emotionally
supporting ways, being responsive to their activities and communications, giving
consistent but not rigid responses that help them understand appropriate and valued
behaviors, using inductive guidance strategies that point out cause and effect,
encouraging responsibility and independence, and teaching problem-solving strategies
to increase their independence.

Children’s adaptation to school in the first two years has long-term implications
for both their cognitive and affective development, which will reflect on their
judgments of self-efficacy. In a large survey study of first and second-graders in the
Baltimore City elementary schools in the early ‘80s, Alexander and Entwisle (1988)
collected and analyzed data from parents, teachers, and students to determine how home
and school factors either facilitate or impede this adaptation to school. They reported
that it is during this critical period that children’s concepts of self are redefined, often
for the first time in terms of how nonfamilial authority and peers react to them. The first
few years of school are especially important in shaping one’s judgments of self as an academic performer (Harter, 1983) and experiences from the primary grades leave lasting impressions on academic self-concept (Entwisle & Haydik, 1988).

From the data gathered in the Alexander and Entwisle (1988) study, it was concluded that the “parent should be the focus in any intervention program, for the parent-child interaction provides the fit between the child, the home, and the school...” (p. 151). Although specific processes were not analyzed in this study, it was found that parent expectations of their children’s performance was important. “To no one’s real surprise, if parents believe their children are smarter than others, their children tend to do better than others in school” (Entwisle & Hayduk, 1982, as cited in Alexander & Entwisle, p. 105). Alexander and Entwisle go on to say that “parental perceptions of their children can be so potent that parents’ beliefs about children’s ability affect performance more than children’s actual ability as measured by standardized tests” (p. 105). There are, however, limitations to this effect. Overoptimistic expectations can have negative effects on children. In an earlier study Entwisle and Hayduk (1982) found that the influence of working-class parents “waned sharply” in the middle of first grade. Alexander and Entwisle’s 1988 study corroborated these findings.

Between the ages of five and seven, shifts in mental functioning occur and children become more conscious of their thoughts and actions. They begin to seek feedback on their actions and to make self-judgments (Bronson, 2000). They are at a particularly malleable stage in their development of self-beliefs. Perceived successes and failures can have a major impact on their self-judgments and consequent behavior.
As Bronson (2000) so elegantly states:

When they believe that they are competent and able to control important aspects of their lives, motivation to exercise this control increases. . . When they believe that they are able to control the outcome of school tasks, they are more interested in these activities and more persistent in pursuing them. . . When they believe in their competence and control in any area of functioning, they are more motivated to engage in it. (p. 233)

Parents at this stage can optimize development of positive self-beliefs by maintaining a warm and supportive social climate, providing a physical environment that challenges but yet supports autonomy, encouraging responsibility and independence, and teaching effective self-regulatory control strategies.

As children proceed through school, teachers and peers begin to exert increasing amounts of influence on children’s developing self-beliefs about academic success. The sources of personal judgments of competence and control become more diverse, and parental influence may diminish as students move through the grades. Although parental actions and beliefs come into play at a different level, their importance is still recognized.

It is worth noting that the focus on aspects of maintaining and developing an autonomous self is congruent with European-American culture, but not necessarily all cultures. The task of “making a dependent baby into an independent adult” (Shweder, Goodnow, Hatano, LeVine, Markus, & Miller, 1998, p. 904) is not universal throughout the world. In many cultures, themes of interdependence are more pervasive and
emphasis is placed on developing positive interactions and mutual engagement with others. Parents would exert very different influences in these contrasting cultures. According to Shweder et al. (1996), although independence and interdependence are intertwined, the two never balance. “What is a major melody in one society is a minor theme in another” (p. 904).

**Peer influences.** Vicarious experience is a significant source of information for young children. An important form of vicarious experience is modeling, especially by like peers. “Seeing or visualizing people similar to oneself perform successfully typically raises efficacy beliefs in observers that they themselves possess the capabilities to master comparable activities” (Bandura, 1997, p. 87). Even infants and toddlers have been known to acquire knowledge about skills and strategies by observing proficient models (Bandura, 1986). Not only does make-believe play nurture critical early childhood capacities that are necessary for later academic success, but sociodramatic play with peers develops social competence as well.

Reviewing the research on children’s adjustment from preschool to kindergarten and factors that influence it, Ladd and Price (1987) suggested that “relating successfully with peers and gaining peer acceptance are not only highly salient to children but also important in forecasting later social and school adjustment” (p. 1169). In this study, several factors predictive of school success emerged. The duration of preschool attendance and magnitude of contact with peers in other community settings was negatively related to anxious behavior. On the other hand, time spent with younger companions was shown to impede later school adjustment. The study found that
children’s positive and negative peer contacts were associated positively with peer and teacher perceptions of behavior. Cooperative play was a significant predictor of peer-liking. Children who had more familiar peers in their classroom at the beginning of kindergarten were less anxious and viewed kindergarten more positively. These are important findings “as children’s comfort and involvement in the school environment may be a necessary prerequisite for their educational progress” (Ladd & Price, 1987, p. 1186). The implications of this study are that young children who have had successful peer experiences and relationships prior to entry to kindergarten have a stronger sense of support as well as a greater sense of control over their environment during a traditionally stressful time of transition. This sets the stage for their future school success.

In Bandura’s sociocognitive theory, children’s intellectual development cannot be isolated from the social context in which it is embedded. The same self-regulatory efficacy that promotes academic success can foster satisfying and supportive social relationships and positive emotional development. Children with good peer relations are more likely to encounter a favorable school environment that is conducive to learning, whereas socially rejected children become alienated, eroding both a sense of intellectual efficacy and self-worth (Bandura, 1997). These reputations may follow them for a long time and have the potential to either enhance or inhibit their eventual learning and development (Ladd & Price, 1987). “Because peers serve as a major agency for the
development and validation of self-efficacy, disrupted or impoverished peer relationships can adversely affect the growth of personal efficacy" (Bandura, 1986, p. 416).

**Individual differences.** In addition to the wide variety of influences on children from their families and peers prior to reaching school age, there are innate individual differences that also impact their future learning and development. These include general learning abilities and preferences, learning or cognitive styles, cultural background, and developmental differences in information processing abilities. Substantial research has documented markers of individual differences from the first year of life in such areas as attention span and focus, level of curiosity and exploration, persistence and practicing effects in engaging with objects, and expressions of task pleasure (Skinner et al., 1998). The cumulative effects of these differences have increasing implications for children’s readiness for the academic challenges of formal schooling. Parental influences, peer interactions, and individual differences have combined to create a wide range of attitudes, beliefs, and performances exhibited by children at the time they begin formal schooling. Yet even acknowledging such differences, there are underlying developmental characteristics common to them as well.

**Characteristics of Young Children that Affect Efficacy Judgments**

Even though the primary years are so critical to setting the stage for either future success or failure, there is relatively little research to explore the direct effects of efficacy under fourth grade, perhaps because researchers question whether such beliefs
actually exist below this age. Paris and Newman (1990) suggest that “empirical studies reveal that 7- to 8-year-old children rarely reflect on their own performance and seldom evaluate and control their cognitive abilities compared to 11- to 12-year-olds” (p. 89). Children are, however, constantly constructing beliefs and concepts about their abilities that, even though often implicit and imprecise, mediate their self-judgments. Understanding these common characteristics and conceptions about competence is necessary to interpreting their behaviors.

Misconceptions: Equating social and academic abilities. Investigations of young children’s early beliefs about their competence reveal some surprising misconceptions. Most of the misconceptions are related to the children’s limited cognitive development. One of the striking misconceptions is that young children often confuse academic ability and social behavior. When Stipek and Tannatt (1984) asked preschoolers to tell which of their classmates were smart, over half of them mentioned children who observed appropriate social behaviors such as staying in their seat, obeying the teacher, and not teasing others. Blumenfeld, Pintrich, Meece, and Wessels (1982) found that first graders believed that the children who shared were average or smart, while those receiving criticism were less capable. These young students were unable to separate behavioral from academic feedback. They related being smart to paying attention, finishing work, and not fooling around; they felt more guilty about inappropriate behavior than fifth graders did. Stipek and Tannett (1984) found that
Kindergarten through third grade children were significantly more likely to refer to work habits than preschool children when assessing their ability, although this may be a socially constructed belief based on teacher emphasis on effort.

Interpretations of teacher actions. Another major age-related difference is associated with strategies used by children to interpret the meanings of their teachers' actions, including expressions of liking and warmth, attention, and use of praise and blame. For example, Lord, Umezaki, and Darley (1990) found that six- and seven-year-old students believed that a student who was hugged by his teacher was smarter than an unhugged student, but ten- and eleven-year olds reached the exact opposite conclusion. The older children interpreted the hugs as a sign of sympathy, indicating that the teacher did not believe that the hugged child had the ability to perform as well as the unhugged child. The advanced cognitive capacity of older students leads them to no longer make linear judgments between what they see and what they interpret. Rather, they are more likely to make assumptions about teacher intentions that are neither intended nor justified. In the same manner, Graham and Barker (1990) found that when teachers gave unsolicited help to students, rather than providing the intended support, the help signaled that the receiving children were less smart and less likely to be successful in the future.

There also may be developmental differences in how children use praise and blame as cues about competence. For example, Barker and Graham (1987) found that five-year-olds perceived praised students to be more able and blamed students to be less competent when compared to students who received neutral feedback. The result
reversed as students got older—praised students were seen as less able and blamed students as more competent. Older children may see criticism as a signal from the teacher that the criticized student has the ability to do better, whereas praise can communicate sympathy for limited abilities. Brophy (1985) calls this “praise as a consolation prize” for failing.

Attention to immediate outcomes and efficacy accuracy. Piaget's (1963, 1970) work on cognitive and perceptual development demonstrated that children of about six and younger were unable to focus on more than one dimension of a problem or situation at a time. Because they are unable to attend simultaneously to multiple sources of efficacy information, or distinguish between important and minor points, their self-appraisals rely on immediate salient outcomes and are relatively unstable (Bandura, 1986).

Kaley and Cloutier (1984) suggested that children's ability to make accurate efficacy judgments is lower than adults' due to the children's less advanced cognitive development. As they mature, children develop their abilities to consider increasingly complex data and use greater logical reasoning to make efficacy judgments. Although the Kaley and Cloutier study showed efficacy estimates to be significant predictors of performance regardless of the level of cognitive ability, the estimates of fifth and ninth graders were more accurate than estimates made by the first graders in the study. Gaskill (2000) found, however, that when students are given a concrete task at an appropriate developmental level, second graders can make accurate efficacy predictions.
Effort and ability beliefs. Young children tend to regard effort as a panacea, believing that anyone who tries hard will succeed (Paris & Newman, 1990). They believe that ability can be improved by effort because hard work is high ability (Nicholls & Miller, 1984). Thus, through the elementary grades, most students believe that effort is the same as intelligence. Students who work harder are seen as more capable, a phenomenon labeled the ‘halo schema’ (Kun, 1977). They believe that if you fail you are not smart and you didn’t try hard; if you succeed, you must be a smart, hard worker (Stipek, 1998).

Equating effort and ability can be seen as a positive belief because all children can perceive of themselves as capable as long as they try hard. The emphasis on effort by young children requires less continuous comparison with others—they believe that they are capable as long as they are working hard. Thus ability is more under the individual’s control (Rosenholtz & Simpson, 1984). As children get older, around 11 and 12 years of age, they begin to infer that having to exert more effort must reflect less ability (Lord et al., 1990). Unfortunately, the older students may protect their self-esteem about ability by avoiding the appearance of working hard—a strategy that undermines learning and diminishes self-efficacy in the long run.

Dweck (1986) distinguished between two basic concepts of ability. An entity view of ability assumes that ability is a stable, uncontrollable trait—a characteristic of the individual that cannot be changed. According to this view, some people have more ability than others and the amount of ability remains constant. An incremental view of ability suggests that ability is unstable and controllable—“an ever-expanding repertoire
of skills and knowledge” (Dweck & Bempechat, 1983, p. 144). By hard work, study, or practice, knowledge can be increased and ability can be improved. Maintaining the incremental view of ability is more likely to lead to the adoption of learning goals, as opposed to performance goals (Dweck, 1986). People with learning goals try to continually increase their competence and understand or master new material, whereas people with performance goals are more concerned with making good impressions or avoiding negative judgments of their ability. Working toward learning goals is characterized by qualities associated with higher efficacy beliefs, such as seeking challenge and persisting when confronted with obstacles. Embracing performance goals results in avoiding challenge and low persistence.

In a study with adults, incremental subjects maintained high self-efficacy, set challenging goals, applied rules efficiently, and performed better while entity subjects actually showed a decline in self-efficacy (Wood & Bandura, 1989). Because children in the earliest grades naturally adhere to the incremental view, efforts to maintain that view are important. By helping young children to maintain the incremental view of learning, educators may be providing greater opportunity for the development of positive efficacy beliefs.

Attribution theory. Intertwined with Dweck’s learning goal theories are the attributional theories of Weiner (1986), which consider the causal dimensions of internality, stability, and controllability as determiners of an individuals’ behavioral response. An internal locus of control leads to feelings of confidence, satisfaction, and pride, while an external locus can lead to either positive responses such as help-seeking
or negative reactions such as helplessness, avoidance, or lack of persistence. The stability dimension can be linked to a person's success expectancy. When success (or failure) is linked to a stable trait such as ability, it seems likely to be repeated. However, if it is linked to an unstable trait such as effort or luck, success or failure becomes less controllable. An interesting addition to Weiner's theory of attributions comes into play with very young children—the category of "unknown source of control" (Connell, 1985). In conducting open-ended interviews with young children in an effort to ascertain their perceptions of causes for success and failure, Connell found that they frequently had no idea. Connell asserted that these individual differences in unknown source of control account for strong prediction of poor school performance during childhood.

*Developing social comparisons.* Although Nicholls (1978) hypothesized that five-year-olds do not have the ability to rank their achievement because of their inability to seriate, some studies have found otherwise. Stedtnitz (1985) showed that four- to six-year-olds were able to estimate their ability to perform specific tasks by using a scale of one to three, using a happy face, indifferent face, and sad face to indicate the three levels. Morris and Nemcek (1982) found that although three-year-olds do not discern differences in ability, they grow progressively more accurate as they appraise their own and peers' abilities. In general, they found that effective use of social comparative information for children's own self-diagnosis lags behind their capacity to distinguish ability differences among their peers. Around age six, children begin to realize that the most informative comparisons are made with others who are like
themselves but slightly better (Bandura, 1986). As children mature, they become increasingly discriminative in their use of comparative efficacy information, depending on the nature of the activity and the people available for comparison (Bandura, 1997).

_Cumulative effects._ A final characteristic that impacts primary-grade students' formation of self-beliefs is related to the amount of cumulative experience brought into the classroom setting. Beliefs such as ability conceptions build gradually and become more stabilized as students gain experience in similar contexts. New beliefs are constructed in part from prior events. Rosenholtz and Simpson (1984) showed that younger students are more optimistic about their ability following failures than older students, although repeated failures lead children to lower their ability assessments for future performances. Several years of school are generally needed in order for children's performance to be noticeably affected by previous failure.

_Summary._ Capitalizing on the opportunity to positively impact the development of self-beliefs of primary-aged children necessitates an understanding of their unique cognitive characteristics. Some characteristics that may be involved during this transitional stage include: misconceptions that equate social and academic abilities; a reliance on modeling; preference for immediate salient outcomes due to inability to attend to multiple sources of information simultaneously; lower accuracy predictions of efficacy; a natural belief in an incremental theory of learning; linkage of effort and conduct to ability; linear interpretations of displays of warmth, effort, praise and blame; and inability to make attributions for failure and success.
The cumulative effect of repeated failure begins to erode the optimism that is typical of younger students, leading to a lowering of expectations and an ultimate decline in performance. The downward spiral, once begun, is difficult to overcome. It is far better to prevent repeated failures in the first place. “Educational practices,” according to Bandura (1997), “should be gauged not only by the skills and knowledge they impart for present use but also by what they do to children’s beliefs about their capabilities, which affects how they approach the future” (p. 176). The school is the primary setting for children’s cultivation of cognitive competencies and intellectual efficacy during the crucial formative period. School practices that undermine students’ positive beliefs should be identified and discarded. Effective programs that lead children to develop a strong belief in their efficacy for academic success should be identified and promoted.

Self-Regulated Learning

The importance of self-efficacy has been acknowledged as a strong influence on achievement behavior, yet positive self-efficacy does not guarantee success. Maintaining efficacy beliefs requires successful actions. Requisite knowledge and skills are necessary for competent performance (Schunk & Zimmerman, 1997). In the words of McCombs and Marzano (1990), an integration of both “skill” and “will” is necessary. Indeed, McCombs’ work (e.g., 1986, 1989, 1990) may provide one of the stronger links between self-systems and self-regulated learning. Defining self-regulated learning (SRL), however, may be a more difficult task than expected.
Bronson (2000) verified the difficulty of presenting a single overarching
definition of self-regulated learning. She elaborated on the evolution and interaction of
eight theoretical perspectives with links to the concept of self-regulation:
psychoanalytical, behavioral, social learning, social cognitive, Vygotskian, Piagetian,
Neo-Piagetian, and information processing. Bronson established connections between
each of these theories to provide a broad conception of self-regulation.

Zimmerman (1989a) discussed self-regulated learning from six prominent
perspectives, showing how each model differs from the others in terms of motivation,
self-awareness, key self-regulation processes, social and physical environment effects,
and development of the capacity to self-regulate. The models presented by Zimmerman
range from the operant views based on Skinner's work, attributing self-regulated
learning responses to external reward and punishment, to the phenomenological views
of McCombs, stressing a global sense of self-esteem/self-concept as primary
motivators. Between these two extremes, Zimmerman contended, are the social
cognitive models (Bandura, Schunk, Zimmerman), volitional models (Kuhl, Corno),
Vygotskian models, and cognitive approaches (Bartlett and Piaget, Paris and Byrnes).
Most researchers, it is assumed, construct their own unique and personally derived
meaning of self-regulation from combinations of the major theories. The social
cognitive views of Bandura, Schunk, and Zimmerman, combined with the Vygotskian
perspective, form the major theoretical foundation for this study.

Underlying most of the models of SRL are common features of (a) awareness of
the relationship between self-regulatory processes and learning outcomes, and (b) use of
the strategies to achieve goals (Zimmerman, 1990). In addition, three features are generally involved in definitions of self-regulated learning: use of learning strategies, responsiveness to self-oriented feedback about the effectiveness of learning, and interdependent motivational processes. The latter underscores the important aspect of SRL that “learning and motivation are treated as interdependent processes that cannot be fully understood apart from each other” (Zimmerman, 1990, p. 6).

Self-regulated learners have assumed the responsibility of pursuing their own learning. They “approach educational tasks with confidence, diligence, and resourcefulness. . . , are aware when they know a fact or possess a skill. . . , (and) proactively seek out information when needed and take the necessary steps to master it” (Zimmerman, 1990, p. 4). Metacognitively, they plan, set goals, organize, self-monitor, and self-evaluate. Motivationally, they take responsibility for successes and failures, are intrinsically interested in the task, and have high self-efficacy, which together lead to greater effort and persistence. Behaviorally, they seek out help and advice, create optimal learning environments, self-instruct, and self-reinforce. (Zimmerman, 1986). Throughout the entire self-regulation process they monitor progress, react, and adapt. This self-oriented feedback loop is at the heart of self-regulated learning. Thus, in self-regulated learning, the student must incorporate a combination of cognitive, metacognitive, motivational, and behavioral processes in order to attain the highest possible level of achievement (Zimmerman & Kitsantas, 1997).

Perhaps one of the most significant recent modifications of the understanding of academic self-regulation, in general, and to the present study in particular, is Pintrich’s
(2000) definition that includes context. The complexity of self-regulation increases with
the revised definition of self-regulated learning as "an active, constructive process
whereby learners set goals for their learning and then attempt to monitor, regulate, and
control their cognition, motivation, and behavior, guided and constrained by their goals
and the contextual features of the environment" (p. 453).

From McCombs' phenomenological perspective, "recognition of self as agent is
essential to understanding how self-regulation occurs and how it is orchestrated"
(McCombs & Marzano, 1990, p. 52). Defining self-regulated learning as "the outcome
of choosing to engage in self-directed metacognitive, cognitive, affective, and
behavioral processes and skills" (p. 52), McCombs and Marzano contend that will and
self-regulated learning skills are reciprocally related once initiated. In their model,
however, will is primary in initiating self-regulation. It is their contention that research
in self-regulated learning has presented a limited paradigm due to neglect of the critical
role of self as agent. From their perspective, the concept of self as agent constitutes a
central position in understanding self-regulated learning. Another feature of this model
is the necessity of awareness of the self as agent, via metacognition. Through
awareness, a sense of personal agency and competency are derived, producing self-
efficacy and internalized goals for learning. Although other researchers of self-regulated
learning do not place as much emphasis on the importance of conscious awareness of
the self as agent as do McCombs and Marzano, it is generally agreed that there is strong
interaction between self-regulated learning and self-efficacy perceptions.
Interactions Between Self-Regulation and Self-Efficacy

Self-efficacy beliefs and self-regulated learning strategies are interdependent. Both require the presence of specific cognitive capacities, including the ability to set goals, self-monitor, reflect, and make judgments. Both also support personal agency or control. Examining the self-regulated learning skills of primary-aged children is essential for understanding the maintenance of self-efficacy.

There are two areas of interaction between the development of self-regulated learning strategies and the development of self-efficacy beliefs. First, a student’s level of self-efficacy predicts her or his use of cognitive strategies and self-regulation. Use of these strategies then predicts academic achievement (Zimmerman, 1995). This creates a reciprocal relationship, for as students increase their use of learning strategies and their academic performance improves, their academic self-efficacy increases. Self-efficacy perceptions, then, are both a reason to learn and an outcome of learning (Zimmerman, 1990).

Second, both self-regulated learning and self-efficacy judgments require a similar series of cognitive and metacognitive processes, including self-observation, self-judgment, and self-reaction. This process of monitoring strategies and beliefs may be the most significant defining feature of self-efficacy and self-regulated learning. Monitoring progress is the critical behavior necessary for making self-judgments. If self-regulated learners judge that current efforts have fallen short of the goal, they can exert more effort or even try another strategy. Thus self-reactions to goal progress
motivate behavior (Bandura, 1986). If progress toward a goal is seen as acceptable, not only is the satisfaction of reaching the goal anticipated, but enhanced self-efficacy and motivation are realized as well.

While strategies and beliefs have a reciprocal effect and both are necessary for self-regulated learning to be realized, it is ultimately the cognitive capacity of the individual to make the necessary observations, judgments, and reactions that underlies the actualization of each. Increasing cognitive capacity has an impact on the level of complexity that a child is able to bring to bear on specific tasks. Both processes, ability to make accurate efficacy judgments and engage in strategic learning, are limited by the level at which that child is capable of cognitively processing the available information.

*Development of Self Regulated Learning in Primary-Grade Children*

Developing strategies that will enable young learners to act as agents for achieving their own success is an important way to enhance their self-efficacy. As Bandura (1997) states:

> It is easier to instill beliefs of personal efficacy if the instruction and informative feedback center on mastery of strategies that enable one to achieve progress rather than only on level of performance attainments. Knowing the means for becoming adept in given endeavors instills a sense of personal control over one’s development. (p. 182)

In other words, students must be given some tools that will increase their odds of succeeding if their efficacy is to spiral upward along with their improving learning skills. Although all learners use SRL strategies to some extent, self-regulated learners
take it a step further by recognizing the connections between their strategy use and their success. In addition self-regulated learners systematically use these strategies to reach their academic goals.

Several factors have been shown to contribute to both the perception of and development of greater control over children's learning in general. These factors include self-verbalization, feedback, strategy training, classroom contexts, and instructional principles.

*Private speech.* Self-verbalization, or private speech, refers to speech that is spoken aloud but addressed to no one particular. According to Vygotsky (1987), private speech serves as an important regulatory function for both cognitive development and self-guidance. Berk's (1965) research supported Vygotsky's contention that children’s self-verbalized speech serves as a link or “gateway” from vocal speech to inner verbal thought. Vygotsky reported that self-speech increases up to the ages of six or seven, then begins to “go underground,” or decline and disappear, around the ages of eight to ten when it becomes silent internal thought. Diaz (1984) found that preschoolers’ private speech closely resembled their mothers’ verbal teaching behaviors, confirming Vygotsky’s emphasis on the important role of dialogue in children’s cognitive development.

Adults provide the guidance and direction necessary to scaffold children to success in learning. As children realize success, they assume more of the control themselves. Mature, self-regulatory forms of private speech help students to organize, understand, and gain control over their environment (Berk, 1985). Schunk (1986b)
listed specific self-regulatory functions that might be improved by private speech. It enables children to focus attention; serve as a means of rehearsal to help in organizing, coding and storing information in memory; helps students keep a positive task orientation by using self-reinforcement and coping statements; and creates a sense of personal control over learning.

Schunk and Cox (1966) found that learning disabled students' use of self-verbalization about newly learned strategies improved their problem solving performance and their efficacy for the task. They found a positive relationship between the amount of self-verbalization about the strategies and performance and efficacy, leading to the inference that the verbalizations helped the students to achieve greater control over their strategy use and learning, which in turn led to higher levels of self-efficacy.

Attributional feedback. Feedback is recognized as an essential step in the promotion of learning and can provide a useful source of information for making self-efficacy judgments (Schunk, 1982; 1983a). Feedback provides information used by learners to confirm, add to, overwrite, tune, or restructure information about knowledge, beliefs, or cognitive tactics and strategies (Alexander, Schallert, & Hare, 1991).

Providing quality feedback is a necessary element in effective teaching. According to Balzer et al. (1989), "if we do not learn from experience, this is largely because experience often gives us very little information to learn from" (p. 430). Schutz (1993) corroborates the importance of feedback when he claims that "In order to improve one's performance, one needs, among other things, a challenging goal to improve and the
ability to obtain and use feedback while performing” (p. 428). In addition, Butler and Winne (1995) recognize that “Research generally confirms that learners are more effective when they attend to externally provided feedback” (p. 246). The type of feedback is a consideration. Different types of feedback exert different influences on performance. In order for feedback to be high-quality feedback, it should be timely, accurate, substantive, constructive, and specific (Danielson, 1996).

Other important elements of feedback have been conceptualized, including effort and ability attributional feedback (Schunk, 1982, 1983a; Schunk & Cox, 1986); strategy use feedback (Schunk & Cox, 1986); and goals and progress feedback (Schunk & Schwartz, 1993). Schunk (1982) found that third-grade students made more rapid progress in learning subtraction skills when they received effort or ability feedback on their past achievements than when they received feedback on future performances or no feedback. Schunk (1983a) found that attributing subtraction success to ability for third graders was more effective than attributing success to effort. Such a finding was in line with Nicholls’ (1978) view that by age nine children are already in a stage of transition from perceiving effort and ability as synonymous to a stage where they believe that increased effort must be a signal for lower ability. Gaskill (2001) found that both effort and ability feedback was more influential in accelerating the onset of cursive writing in second graders than the use of typical reinforcement feedback.

Schunk and Cox (1986) found an advantage in effort feedback. Students who had received effort feedback during problem solving training were able to solve more problems correctly and had higher levels of self-efficacy. The effort feedback was most
beneficial when it was related to strategy use and actual performance. Schunk and Swartz (1993) examined the results of a learning strategy, goal setting, and its effect on fifth graders' self-efficacy for writing. They suggested that feedback received from progress toward a goal provides information about the usefulness of the strategy and also acts as a persuasive form of self-efficacy information. In addition, feedback about the learning process contributes to student monitoring, the heart of self-regulation.

Strategy training. Over the past two decades there has been substantial research that documents young children's development of learning strategies. From approximately five to twelve-years-of-age, children acquire a diverse range of cognitive strategies, including focusing attention, monitoring understanding during reading, and planning study time (Paris, Newman, & McVey, 1982). Zimmerman and Martinez-Pons' (1988) list of 14 self-regulated learning strategies, specific to a school context, has been used with high school and middle-school students. Among those strategies that are more readily available to younger students, particularly if given training and a rationale for their use, are attention monitoring or maintaining task focus, self-verbalization, help-seeking, memory and metamemory skills, time planning and management, and goal setting.

School plays an important role in the development of skills and strategies. Research has shown that the schooling experience is a powerful shaper of skills, such as memory skills, in young children. Morrison, Smith, and Dow-Ehrensberger (1995) cite major differences in cross-cultural studies between schooled and unschooled children in the growth of memory skills, among other things. They looked at the growth of memory
and language skills of students clustered around their school district’s cut-off date for entrance age, comparing the students who just made the cut-off to begin school with those who just missed. They concluded that the shift in children’s cognitive functioning between the ages of five to seven is “almost exclusively a product of schooling and related experiences, at least in the limited area of memory development studied” (p. 795).

While use of learning strategies has been shown to promote academic achievement in a variety of studies (Pressley, Borkowski, & Schneider, 1987; Zimmerman & Martinez-Pons, 1986, 1988, 1990), knowledge of strategies does not ensure their use in an effective or consistent manner (Zimmerman, Bandura, & Martinez-Pons, 1992). Teachers should include information about how and why to use strategies if they want students to integrate them into their behavioral repertoire (Carr, Kurtz, Schneider, Turner, & Borkowski, 1989).

Strategy development appears at four levels of functioning, according to Miller, Haynes, DeMarie-Dreblow, and Woody-Ramsey (1986). At one level, production deficiency, a child does not produce an appropriate strategy even when it would be helpful. During the stage of control deficiency, the child sometimes produces a helpful strategy but not consistently. There is failure to control or execute the strategy effectively. At the utilization deficiency level, the strategy is used consistently but the child does not benefit from strategy use. Too much processing capacity may be allocated to producing the strategy, leaving the child unable to attend to the associated benefits. Other possible causes of a utilization deficiency include limited knowledge,
lack of conditional knowledge for the strategy use, failure to inhibit a previously learned strategy, and inadequate metamemory (Miller, et al., 1986). It is only at the level of effective strategy use that a child produces a strategy consistently and benefits from the use of that strategy.

Deliberate attention to behavior informs and motivates (Zimmerman, 1990). Paris & Lindauer (1982) mentioned young children rarely correcting their own errors and often continuing to believe their answers were correct even after being shown their errors, as an example of their poor metacognitive regulation and lack of strategy use. Training in metacognitive regulation, including encouragement of use of self-guiding verbalizations and appropriate use of study time, has been shown to improve children’s ability to regulate their own cognitive strategies (Meichenbaum & Asarnow, 1979).

Classroom contexts. Perry (1996), in studying classroom contexts that advance self-regulated learning in young children, observed that few studies have investigated SRL in natural classroom settings. Most are either designed for decontextualized environments that optimize opportunities for promotion of SRL, or depend on self-reports of students without regard for varying contextual factors. Perry’s data were collected from a variety of natural classroom sources, including second- and third-graders’ writing and portfolio activities, weekly classroom observations, teacher questionnaires and observations, and also student questionnaires, observations, and interviews. Her study supported two important conclusions: not only does classroom context impact students’ self-regulated learning, but second and third graders also have the cognitive sophistication needed to adopt “skills and attitudes that are characteristic
of self-regulated learners” (p. 725). Results of the study attested to the importance of “designing classroom environments that promote academically effective forms of SRL” (p. 725).

Teachers who emphasize strategy use may be influential in developing children's metacognitive learning capabilities. Moely, Hart, Leal, Santulli, Rao, Johnson, and Hamilton (1992) found that first graders are dependent on the teacher for emphasizing cognitive strategies. First graders' limited metamemory and self-regulatory skills interfere with their ability to invent and evaluate ways of learning. Repetition of strategy suggestions and providing a rationale for strategy use helps to promote maintenance and generalization (Moely et al., 1992).

Teachers' own sense of personal efficacy impacts their general orientation and specific instructional practices in the classroom. As Woolfolk and Hoy (1990) reported, teachers with lower levels of efficacy for instruction tend to adopt a custodial approach in their classrooms that undermines students' sense of autonomy. Teachers' with high levels of teacher efficacy tend to be more humanistic in their approach, thereby supporting students' intrinsic interests and academic self-directedness.

Instructional principles. The overarching goal of self-regulated learning is the transfer of control from others to the self (Paris & Newman, 1990). Even though educational psychologists disagree about exactly how self-regulated learning develops in children (Winne, 1995, 1997) they do agree on some instructional principles. If these principles, in fact, lead to the development of SRL, they should similarly enhance development of increased self-efficacy for the strategies executed.
In summarizing general principles common to interventions for teaching students useful learning strategies, Winne (1995) listed four basic ingredients. First, learners need the conditional knowledge that enables them to know when a particular strategy is appropriate. Second, learners should be taught the action knowledge of metacognitive, cognitive, and behavioral skills used in learning. Third, learners need the motivational knowledge to value learning and use the previous two forms of knowledge. Finally, learners need prerequisite knowledge in the domain and knowledge of the task.

Winne (1997) noted that although instruction in strategies for self-regulated learning can be learned, not enough explicit instruction is provided in typical classrooms. Yet, students do seem to exhibit self-regulated learning. It is Winne's contention that it is possible for students to "bootstrap" information for SRL by observing others or by conducting informal "trial and error" experiments. "Providing appropriately paced learning activities, explicit how-to-do-it instruction coupled with explicit invitations to consider experimental designs and outcomes, and continuous feedback helps students devise more effective experiments for bootstrapping better forms of SRL" (Winne, 1997, p. 389). Relating to a discussion of cognitive skills of young children, Winne inferred that consistent and informative prompts are necessary for young students to derive needed information for bootstrapping effective forms of SRL. Extensive practice of the right kind is required for learning more effective forms of SRL. According to Winne, a lack of the opportunity for such practice creates a barrier for students to develop SRL expertise. While Butler and Winne (1995) argued
that SRL is inherent in knowledge construction, they nevertheless conceded that it may not be carried out at optimal levels unless explicit instruction is offered.

In a rejoinder to Winne’s (1995) concerns about students’ failure to self-regulate, Zimmerman (1995) stressed the complexity of self-regulated learning from the social cognitive perspective. Zimmerman’s analysis capitulated the important interaction that exists between self-efficacy and self-regulation. Possessing metacognitive knowledge and skill, according to Zimmerman, does not necessarily result in its successful application. Rather, the underlying sense of self-efficacy or personal agency is needed as the motivational or behavioral inducement to self-regulate. Self-regulation involves a complex interaction involving social, motivational, and behavioral components. Bandura (1997), too, recognized the reciprocal relationship between self-regulated learning and self-efficacy. “Within the sociocognitive framework of bidirectional causality, acquisition of cognitive subskills strengthens beliefs of one’s academic efficacy. Both academic and self-regulatory efficacy, in turn, have reciprocal effects on cognitive and metacognitive learning strategies” (p. 233).

Goals and Goal Setting

From the social-cognitive perspective, the basis of self-regulated learning is the interaction of learning strategies and self-efficacy. “When children use these strategies, they feel efficacious, which leads them to use additional strategies, and the cycle continues” (Grolnick, Kurowski, & Gurland, 1999, p. 4). Isolating one strategy at a time and investigating its influence on young children’s performance and self-efficacy is a
research strategy that may lead to our increased understanding of how to facilitate young students’ strategy use early in their academic careers.

Goals

In the field of cognitive theory, the word “goals” has become almost ubiquitous. It is nearly impossible to pick up a journal article on motivation or self-regulated learning without encountering the word in some context or other. When one begins to examine the potential meanings associated with the word “goals,” however, it soon becomes apparent that the number of levels and uses abound. In a review of motivational literature, Murphy and Alexander (2000) examined over 120 achievement motivation articles with the purpose of identifying fundamental terms used in the study of academic achievement or academic development. The resulting corpus included 20 motivation terms, nine of which included the term “goal,” making it the area with the greatest proliferation. Murphy and Alexander divided these into two general areas of social goals and goal orientations. Goal orientations are defined as “a reason or purpose for engaging in some learning-oriented activity” (p. 35). Social goals, including the work in self-efficacy, include “some performance standard or objective toward which individuals are aiming their attention and energy” (p. 35). The use of the term “goal setting” in this study will be differentiated from the more general theme of goal orientations and social goals. It will be used to represent a specific task similar to prediction.

Goal Setting

A goal has been defined simply as an aim of an action or something an individual is trying to accomplish (Locke, Shaw, Saari, & Latham, 1981), and goal
setting has come to be seen as a “major determinant of performance” (Horn & Murphy, 1985). Schunk (1986a) provides a more definitive understanding of goal setting by stating that it “involves establishing a standard or objective to serve as the aim of one’s actions” (p. 62).

Following an extensive review of 110 studies on goal setting and task performance that took place between 1969 and 1980, Locke et al. (1981) identified the effects of goal setting on task performance as “one of the most robust and replicable findings in the psychological literature” (p. 145). Ninety percent of the studies they reviewed showed positive effects, both in the laboratory and in field settings. Effective use of the strategy was shown with children as well as adults. Key mechanisms triggered by the use of goal setting, as reported by Locke et al., include direction of attention and action, activation of energy or effort, increased persistence (deemed a combination of the first two—directed effort over time), and motivation for development of strategies to attain the goals.

Schunk (1990) identified goal setting and self-efficacy as two interactive processes involved in self-regulated learning and operationalized goal setting as a process of establishing a goal and modifying it as necessary. Schunk (1986a) described the properties of specificity, proximity, and level of difficulty — all important for their influence on student performance.

It is Schunk’s model of the reciprocal interdependence between self-regulation, goal setting, and self-efficacy that serves as the foundation for the present investigation, as shown in Figure 2.

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Figure 2. Bidirectional relationships between SRL, self-efficacy, and goal setting. (Schunk, 1990).

From the social cognitive theory framework, three subprocesses are included in self-regulation: self-observation, self-judgment, and self-reaction. Goal progress and self-efficacy are constantly evaluated as students work towards a task. The three self-regulation subprocesses are used to observe, judge, and react to progress, and adjustments are made accordingly. If satisfied with goal progress, students' efficacy for the task is enhanced, leading to the setting of higher goals and vice versa. Finding ways to get young students to be active and successful participants in this self-regulated process, leading to their own sense of increasing control and higher levels of self-efficacy, is an important step to getting them to attain their highest potential for academic achievement.

*Goal setting studies.* Studies of goal-setting behaviors have been prevalent. The proliferation of research on goal setting seems to have sprung up in the late 1960s, and the names of Edwin Locke and Gary Latham emerged as forerunners in the field. In a 1990 article, Locke and Latham traced the evolution of goal setting theory to three
sources: “the Wurtzburg school on intention, task, and set; the work of Lewin and his followers on level of aspiration; and the work of Ryan on intentions” (p. 240). In their own words, Locke and Latham (1990b) define goal setting theory as an assertion “that task performance is regulated directly by the conscious goals that individuals are trying for on the task” (p. 240). Locke and Latham mentioned that nearly 400 studies had investigated types of goals that lead to better performance. Although many of the studies were undertaken with adults in their work place, some were also based on academic performance of children.

Young children’s goal setting. Of critical concern in the proposed study is whether primary-grade children have the cognitive ability to set realistic goals and are then able to judge their progress toward these goals. Previous research supports the view that they can do both. An early study by Gaa (1973) investigated the effects of goal-setting conferences on young children’s reading achievement and attitude in the classroom. Fifty-four elementary students, in units that were equivalent to grades one and two, were assigned to three treatment groups, goal-setting, conference, and a control group that received the same classroom instruction as the other groups but no intervention. The children in the goal-setting group met weekly with an experimenter who asked them to use a check list to check off goals they wanted to accomplish during the coming week. The children were then asked to rate their level of confidence that they could actually achieve the goals they set. The children in the conference group also met weekly with the experimenter but did not participate in goal setting. They discussed the material covered during the previous and upcoming weeks.
Findings from this study showed that the goal-setting strategy has important implications even for young children. The children who participated in goal-setting conferences set fewer goals than the children in the other groups, indicating a greater ability to set realistic goals. The discrepancy between the number of goals set and goals actually attained decreased over the time of the study, indicating that practice and feedback were useful in setting increasingly accurate goals. Even more important than the change in goal-setting behavior, however, was the fact that children who set goals showed consistently higher academic achievement across the subtests of a criterion-referenced reading test. The author suggested that even more success might have been achieved if classroom teachers were incorporating goal-setting strategies with their students in an on-going basis, rather than an experimenter on a limited basis.

In another study of elementary children, Bandura and Schunk (1981) investigated the relative effects of proximal, distal, and no goal setting on mathematics achievement as well as on self-efficacy and interest. Their sample consisted of forty children ranging in age from seven to ten-years-of-age who were both grossly deficient in arithmetic skills and exhibited very low interest in math. Using a self-directed learning procedure, students participated in seven 30-minute sessions of working on subtraction problems. Children in the proximal goal treatment condition were told that they “might consider setting themselves a goal of completing at least six pages of instructional items each session” (p. 589). Children in the distal goal group received the suggestion that they consider a goal of finishing all 42 pages of problems by the end of
the last session. The no goals group was told to try to finish as many pages as possible, and a control group took the final assessment without going through the instructional material.

Proximal goals were shown to not only have the largest effect on the students’ progress but also on their arithmetic efficacy and interest. Bandura and Schunk hypothesized that proximal goals provided a standard with which the children could measure their performance, enabling them to make better judgments of their capabilities and thus supporting enhancement of self-efficacy. The proximal goals “promote and authenticate a sense of causal agency” (p. 587) that heighten interest and engagement. Also, it should be noted that students were not given specific goals, just suggestions as to goals they “might” want to set. By leaving the actual goal decision up to the students, it was anticipated that they would increase their own self-involvement and goal-commitment.

Since no data described any differentiated performance by age in this study, it is assumed that the seven-year-olds performed in a similar fashion to the older children. Bandura and Schunk (1981) used a unique training method for making efficacy judgments. Before the children in the study were asked to make efficacy judgments on their ability to solve arithmetic problems, they were trained to rate their perceived capability to jump selected distances. Using a 100-point scale, children rated their self-judged efficacy for the degree of certainty with which they thought they could perform the concrete jumping task. This practice task helped to ensure that children understood the similar rating scale used for making their arithmetic efficacy judgments.

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Both the Gaa (1973) and Bandura and Schunk (1981) studies indicated that goal setting can be used successfully with young children. Gaa's study resulted in trained children setting more realistic and accurate goals, but they did not accomplish this on their own. They needed adult assistance in setting realistic goals and feedback that helped them to monitor their performance. The Bandura and Schunk study showed the benefits of a goal-setting strategy, emphasizing the importance of using proximal goals with young children, and also suggested a positive relationship to the enhancement of self-efficacy. These studies lend support to the importance of starting goal-setting training early.

A third and more recent study provided additional support for this assumption. White, Hohn, and Tollefson (1997) conducted a study with the purpose of determining the optimal time to instruct children in goal-setting strategies that would incorporate effort attributions, self-efficacy, and strategic monitoring components. Children from second through fifth grade were included in order to make age comparisons. Prior to the actual study, all participants were taught a Bean Bag Game that helped them to understand how to set goals for different levels of difficulty, plan for successful attainment of their goals, and use performance feedback to judge the accuracy of their goals. The actual study relied on children using the same strategies to set goals for the number of spelling words they thought they could spell correctly the following week. Over the course of five weeks, children set goals and indicated their level of satisfaction with their performance from the previous week. A "bank account" of play money added
incentive for realistic goal setting, as money was deducted for overprediction and less money was deposited for underprediction. Thus, the importance of accurate predictions was emphasized.

This study controlled for students’ varying abilities as well. In addition to the goal setting aspect of this study, self-efficacy instruments were designed for each grade level so that they would be both age-appropriate and domain specific. Each grade level’s instrument, consisting of 20 spelling words organized in a hierarchical level of difficulty, was presented weekly to the children for them to predict how many they could learn to spell that week.

The results of the White et al. (1997) study were unexpected as second and third-graders did nearly as well as their older counterparts in the areas of setting realistic goals, attributing their progress to effort, and monitoring progress toward their goals. In addition to the unexpected findings about goal setting, second and third graders’ positive self-efficacy ratings in spelling were found to have the highest correlation to their goal-setting behavior. The relationship had dissipated by fourth and fifth grades. These findings led the authors to conclude that “Given the relationship between realistic goal setting and learning established by previous research, teachers of primary level students should consider encouraging students to set realistic achievement goals for themselves and to expend effort to attain them” (p. 56). No significant differences across age groups suggests that direct teaching of realistic goal setting strategies as early as the second grade has merit. In fact, as White et al. suggested, waiting until fourth grade may be too late.
Findings from these three studies contradict the belief that primary-aged children, particularly those below third grade, do not have the cognitive capacity to make the abstract judgments needed for complex tasks such as setting goals, making efficacy judgments about their attainment, and monitoring progress. There is reported evidence that goal-setting strategies are even being implemented with children below school age, as in the Bright Start preschool program (Seng, 1998), but it is rare. Results of the White et al. (1998) study, however, indicate that second-grade students benefit from goal-setting strategy training.

Within the large body of goal-setting research, even studies related to older elementary children are limited. To get a broader sense of the relevant literature on goal-setting, it is necessary to incorporate findings from studies of older students that have implications for the present study in terms of design and results.

*Older elementary children's goal setting.* Student benefits from goal setting have been established by several studies of older elementary children. Schunk (1983c) investigated the effects of children's use of social comparative information on both their performance and their self-efficacy perceptions. Pretests included both self-efficacy judgments for a division task and an actual division skill test. Children received two 45-minute training sessions. In the “comparative information only” condition, students were told by the proctor that many other children she had seen had completed at least 25 of the 50 problems during the first session and 16 during the second. In the “goals only” condition, it was suggested to students that they “might want to decide to work at least
25/16 problems during the period." As in Bandura and Schunk (1981), goals were given as suggestions so that students were still able to make their own actual decisions.

Students in the combined social comparative information and goals group received both sets of instructions and a control group was used to control for the effects of training. Children with only comparative information did as well on training sessions as the combination group, but not as well on the posttest performance and efficacy. Children with goals only did not attain the same level of skill development but did develop self-efficacy perceptions as high as those in the combination group. Although Schunk provided suggestive explanations for these findings, he acknowledged the difficulty of understanding the underlying mechanisms without questioning students about how they process goal information and how their motivation and self-efficacy are affected by their self-perceptions. A general finding of the study, however, was that giving children specific, proximal goals, along with information about how well other children did, was effective in fostering skill and efficacy for solving division problems.

In a similar study, Schunk (1984) investigated the relative effects of performance-contingent rewards and proximal goals on nine- to eleven-year-old children. Over the course of two sessions on two consecutive days, students worked on two training packets with more division problems than they would be able to complete in a session. Using the three experimental treatment groups of rewards only, goals only, and rewards plus goals, children were trained on division skills in a format similar to the previous Bandura and Schunk (1983c) study.
In the rewards only group, children earned points for problems solved and were able to exchange their points for prizes such as magic markers, stickers, and erasable pens. The goals only group received suggested numbers of problems that “they might want to work” during the period. The goals were 20 for the first session and ten for the second, based on numbers of problems that had been completed by a different group of similar children in a pilot study. The rewards plus goals students received both of the above treatment instructions during each session. All three groups learned to solve the problems rapidly, regardless of the treatment, due to the motivation derived from the proximal goals or the rewards. The combination of rewards plus goals, however, led to the highest performance and the highest self-efficacy ratings than either treatment alone.

Perhaps this effect was due to a higher level of goal commitment attained by combining goals and rewards, as these children judged themselves to be more certain of being able to attain their goals. Schunk also suggested that the combination may have provided a clearer standard for the students to use in gauging their progress. He cited Schunk and Gaa (1981), stating that “A clear standard against which to assess progress may be especially important for promoting self-efficacy among young children, who otherwise may not be fully aware of how they are performing” (p. 33). Although this study was very limited in scope, it builds on previous studies that show the value of proximal goals, especially with young children.

The most recent study found on goal-setting (Shih & Alexander, 2000) also investigated the concept of social comparative influence but differed from the Schunk (1984) study in that it investigated the difference between self-comparison and social
comparison. Eighty-four fourth-graders participated in their natural math classroom settings in Taiwan. The skill studied was fractions. Students were pretested on goal orientation, self-efficacy, and fraction skill and then randomly assigned to four treatment conditions in a 2(goal setting vs. nongoal setting) x 2(self-referenced vs. social-referenced feedback) design. Posttests on the same variables followed the fractions training. Students in the goal setting with self-referenced feedback condition used a bar graph recording sheet to indicate the number of problems they had correctly solved on the last session and then self-set goals for the next session by drawing a line on the next bar graph. The method for the goal setting with social-referenced feedback condition was more complicated. Students were divided into quartiles so that realistic goals could be used relative to their previous performance, then given a goal equal to the highest number of problems that other students in their quartile had solved on the previous day. Students in this condition were required to fill in both the social comparative goal information as well as their own individual goal. It was expected that the social comparative goal would influence their personal goal. Students in the two remaining groups received the same treatment as their comparable group but were not asked to set goals.

As anticipated, students in the self-referenced group demonstrated higher fraction skill and self-efficacy than the social-referenced group. The authors suggested that this may be due to the fact that the self-referenced group focused more on self-development, more like mastery goal orientation, whereas the social-referenced group became more preoccupied with how they were doing compared with others, as is the
case with performance goals. Contrary to expectations, goal setting did not increase either self-efficacy or fraction skill in this study, although the authors surmise that the salience of the information provided on the bar graphs may have induced them to set goals spontaneously and implicitly. Although the previous studies have produced interesting findings, they have been short-term and it would be useful to know if results are maintained or changed over longer time periods.

The Shih and Alexander (2000) study was not the only experiment in which goal setting procedures did not have the expected positive effect on performance. Sagotsky, Patterson, and Lepper (1978) also conducted a study in a natural classroom setting to investigate the individual and joint effects of self-monitoring and goal setting on students’ study behavior and achievement in an individualized mathematics program. The study was based on related literature that suggests that specific self-set goals can have beneficial effects on performance, and that self-monitoring modifies behavior when an individual desires to make a change and uses the monitoring feedback to compare actual performance to the goals. Thus it was hypothesized that a combination of the two procedures would be effective in exacting behavior changes.

The nine-week study consisted of a four-week baseline phase followed by a five-week treatment phase. The 67 fourth and fifth-grade students were each observed for a 2-minute period, four times a week during their 50-minute individualized math instruction program. Students in each of the four treatments were given instructions individually as follows. Students in the goal setting condition were asked to write the page and problem number where they started each day, record a goal on their cover
sheets to decide where they could get in the packet if they worked hard, and mark where they were at the end of the day to see if they reached their goal. Students in the self-monitoring condition were given a grid of twelve empty boxes and asked to notice from time to time if they were actually working on their math or not. They were to mark a + or - in the grid accordingly, and a - was to serve as a reminder to resume their work. The goal-setting and self-monitoring condition received both of the previous sets of instructions and the control group recorded the page and problem number where they stopped working each day. The classroom teachers were blind to the treatment conditions of the individual students.

While the self-monitoring procedure proved very successful in facilitating students' ability to return to on-task behavior when necessary, the goal-setting procedure neither enhanced the students' study behavior nor the effectiveness of the self-monitoring treatment. The authors, however, provided several useful insights from this study. One is that the heterogeneous mathematics materials used in this study may not have been appropriate for successful application of goal-setting techniques. Estimating performance was complicated because the problems varied in number and difficulty from day to day, making accurate goal setting difficult. The conclusion was that "goal setting procedures may be most appropriate for tasks characterized by a more constant or predictable difficulty level" (p. 251). The second insight is that the goal-setting procedure may have been more effective if students had been given training.
opportunities for setting reasonable but challenging goals for themselves. It is assumed that the issue is even more critical when working with younger children and the study by Gaa (1973) provides a standard in this respect.

Tollefson, Tracy, Johnsen, Farmer, and Buenning (1984) also trained students to set realistic goals. Junior high school students with learning disabilities were selected for this study because some of their school difficulties had historically been shown to be due to a lack of goal-setting and other planning skills. Interventions were designed to teach students to use feedback to develop specific and realistic goals with the aim of helping the students to make attributions of success contingent upon their own effort rather than ability, luck, and task difficulty. Although the purposes of this study were more complex than might be possible with younger children, the method of training was appealing to all ages. Students were divided into experimental and control groups by classroom placements. Two interesting achievement games formatted after a baseball game and a basketball game were designed to acquaint the students with the procedures that would be used. During the study, student goals were set in the form of predictions of how many spelling words they would spell correctly or math problems they would solve correctly on a weekly test. Students charted their progress, compared their scores with their goals, evaluated how well they had done, made causal attributions for their performance, and if they wanted to they changed their plans. The complexity of the intervention became increasingly more abstract as it progressed from a physical game, to an academic game, to an achievement contract.
At the beginning of the Tollefson et al. (1984) study, students were placed in a category based on their goal-setting accuracy, with the four categories of realistic, overpredicting, underpredicting, and random. A “significant increase in the number of students exhibiting realistic goal-setting strategies” (p. 228) was gained by the treatment group. Unfortunately, some of the students did not transfer the goal-setting strategy to their school work. It should be noted that LD students typically have a history of failure in school and have developed mechanisms to protect their own self-esteem over the years. These issues undoubtedly create a more complicated situation than might be present in a typical second-grade classroom.

Task difficulty is another characteristic of goal-setting that has been investigated. While most of the literature supports the view that more difficult goals result in higher levels of task performance (Locke et al., 1981; Schunk, 1983d) little of this research has been done with children. Schunk (1983d) found that students with more difficult goals in terms of having more problems to complete solved more than students with easier goals. Schunk (1986a) noted, however, that “positive effects due to goal difficulty depend on the individual having sufficient ability to reach the goal” (p. 72).

Sagotsky and Lepper (1982) showed that children’s selection of difficult versus easy tasks could be influenced by modeling behavior. They explored changes in children’s choice of easy or difficult goals based on the influence of peer models. Thirty-eight third-grade children participated in an initial session, with two follow-up sessions occurring three weeks and two months later. During the first session, the
control group watched a movie of a model playing a beanbag toss game with four levels of difficulty. The model placed a gold star on a certificate next to the corresponding level of difficulty each time he had a successful throw, and the control group then proceeded to perform the same task.

In the two modeling conditions, children continued to watch the movie and saw either a model who selected only the two most difficult targets and missed some, or a model who selected only the two easiest targets and got them all. The observers then played the game, choosing any targets they wished over 20 trials. Children who watched the model who chose difficult goals chose more difficult goals for themselves than did children who watched models who chose easy goals. Effects for girls were more significant than for boys. Effects generalized into the academic setting during the second session with spelling words and a pleasure activity during the third session with brainteaser puzzles. However, this was a very small sample and the design seemed to have few controls for either internal or external validity, making it difficult to make generalizations from it.

*Self-set versus assigned goals.* An important aspect of Locke and Latham’s Goal Setting Theory (1990a) is the level of commitment an individual has toward the goal. In order for goals to affect performance, the person must be truly committed to reaching them. Levels of commitment are generally highest when people believe they are capable of attaining them and have a high level of value for doing so (Locke, Latham, & Erez, 1988). It would seem that individuals who set their own goals would have a higher level of commitment to attaining those goals than if goals had been assigned.
The research, however, has not shown this to be the case. In studies of adults by Latham & Lee (1986) and Locke & Latham (1990a), assigned goals were found to be as effective as individually set goals. Locke & Latham (1990b) offer several reasons as an explanation. Assigned goals are typically set by authority figures and it may be interpreted that the authority figure has confidence that the subordinate has the ability to reach the goal. Difficult assigned goals may pose a challenge to people to prove their competence, and help to define the standards for attaining self-satisfaction with a performance.

Individual differences are not typically considered in goal-setting studies. Horn and Murphy (1985), however, considered the differences between assigned goals and self-determined goals in high and low need achieving undergraduate females. Using the solutions of anagrams as a measure, it was found that low need achievers performed better under self-set goal conditions, but high achievers performed best when the goals were imposed. In a study of fourth-grade children who had difficulty with division problems, Schunk (1983b) found that self-set goals were more effective than those imposed by an adult. For higher achievers, the challenge of an imposed goal may increase the potential importance of the task, while the positive impact of self-set goals on low achievers may lie in the opportunity to exceed the goals (Horn & Murphy, 1985).

Summary

Previous research provides a foundation for the current study. Although the number of studies with young children is limited, there is evidence that if given ample
training and the right kind of tasks even second-graders can be taught to set realistic
goals (Gaa, 1973; White et al., 1997) and to use their performance against these goals to
make self-efficacy judgments (Bandura & Schunk, 1981; White et al., 1997). Some goal
characteristics that must be attended to are task difficulty, specificity, and proximity.
Whether students perform better when setting their own goals or from assigned goals
may depend on individual differences in achievement expectancies (Hom & Murphy,
1985; Schunk, 1983d). It has been shown that feedback (Shih & Alexander, 2000),
rewards (Schunk, 1984) and peer modeling (Sagotsky & Lepper, 1982), influence goal-
setting behavior. Schunk and Rice (1989) summarize the value of teaching strategies in
the statement that “students who believe they are learning a useful strategy experience
greater control over learning and self-efficacy for skill improvement” (p. 339).

“Goals can be seen as the cognitive link between our general motives and
specific behaviors” (Shah & Kruglanski, 2000, p. 85). This statement provides a
rationale for the current study. The corpus of Schunk’s (e.g., 1983, 1984, 1986) work in
particular argues for the interactive relationship of students’ goal setting and efficacy
perceptions. By teaching young children to set increasingly higher goals and stretching
to attain them, it may be possible to increase their self-efficacy for reaching challenging
goals and project them into the desired upward spiral of motivation and performance.
Accomplishing such a task in a natural classroom setting, with a skill that overarches all
academic domains, will give children access to strategies for enhancing their ability to
self-regulate their own performance and perpetuate the positive interaction with self-efficacy. That is the goal of this study. The selected task is related to listening comprehension, a vital skill in the academic setting.

Listening in the Educational Setting

Listening is the most basic of the four major areas of language development. Listening educators Wolvin and Coakley (1968) underscored how our ability to “speak, read, write and master complex cognitive skills is directly and indirectly dependent upon our ability to listen” (p. 12). Listening exerts an early influence on learning. It has long been recognized that much of our language development occurs in early childhood. There is now evidence that language development begins in utero around the sixth month of pregnancy. Listening provides the key source of information for children prior to entering school and continues as a main source of information transmission into the school years.

Wolvin and Coakley (1968) reported that elementary children were expected to listen in school 57.5 percent of the time, and 54 percent of their time they were listening to the teacher. The percentage of time spent listening in classrooms rose to nearly 90 percent by high school and college. Even in more active and developmentally appropriate elementary classrooms, reported Jalongo (1996), approximately 25 percent of children’s time was expected to be spent listening to their teachers. Clearly, listening is a critical skill although it is frequently overlooked in many educational settings.

Wolvin and Coakley (1988) suggested that part of the neglect of listening instruction in American schools could be due to the scarcity of available instructional
materials. Others believe teachers may feel inadequate to teach listening or may believe the elementary curriculum is already too full (Funk & Funk, 1989). It is sometimes assumed that better listening will develop naturally from the daily practice children get in their classrooms. Yet expecting children to listen more has not solved the listening problem. Children need to be taught to listen better (Jalongo, 1996). Little research has focused on listening since the 1950s and 1960s, even though educators recognize its importance (Swafford & Paulos, 1993). Brigman, Lane, Switzer, Lane, and Lawrence (1999) discussed research that reported the value of applied learning skills, including listening and attending, for school success. The few studies they cited involved individual or small group interventions rather than whole class instruction.

*Listening Defined*

It is generally acknowledged that no clear cut definition of listening has been agreed upon (Dunkel, 1991). Based on an intensive analysis of twenty definitions of listening that have evolved since 1925, Wolvin and Coakley (1988) provided the following structural definition: “Listening is the process of receiving, attending to, and assigning meaning to aural stimuli” (p. 93). They have thus emphasized the importance of these three critical processes. They point out, however, that the definition of listening continues to be evolving and that listening research is in an exploratory state.

The Wolvin-Coakley Listening Taxonomy provides the centerpiece of their program, dealing with specific skills for reinforcing, improving, or changing listening behaviors. Their taxonomy is considered a hierarchy, involving specific skills that can be viewed graphically as a tree, as shown in Figure 3.
The "roots" of the tree are discriminative listening, distinguishing the auditory and accompanying visual stimuli. Discrimination is at the base of all listening. The "trunk" is comprehensive listening, understanding the message to retain and recall information. The comprehension trunk supports the other purposes of listening—therapeutic, critical, and appreciative. Although the comprehension aspect of understanding, or assigning meaning, constitutes the crux of listening in the present study, elements of critical listening and appreciation may also be involved.

*Listening comprehension.* A major delineation in the Wolvin-Coakley hierarchy involves the distinction between the physiological aspect of *receiving* (hearing, apprehending, and sensing), and the cognitive aspect of *assigning meaning.*
(interpreting, or understanding the received stimuli). The listener’s goal is to attach as near a meaning to the received message as the sender intended. Reaching such a goal is a complex task not always realized because of the personal nature involved in processing. Differences in the senders’ and receivers’ experiences, whether past, present, or even future, influence the interpretation of the message. Various theories of how meaning is assigned have been proposed, including image theory, classical conditioning, linguistic reference, and meaning as an implicit response (Wolvin & Coakley, 1988). Whatever the theory, however, an individual’s personal memory store provides the basis for the eventual assigned meaning.

According to Wolvin & Coakley (1988), each individual’s frame of reference consists of attitudes, knowledge, communication skills, life experiences, socio-cultural patterns, background, present feelings and thoughts, expectations of self and others, values, beliefs, personality factors, interests, concerns, fears, pressures, tensions, needs, biases, prejudices, stereotypes, fantasies, morals, convictions—everything that makes up the sum total of the individual. (p. 85)

These elements comprise an individual’s world view that creates the perceptual filter through which messages pass en route to the assignment of personal meanings. Meanings do not reside in the words themselves, but in the users’ and receivers’ points of view.

Attention. In the Wolvin-Coakley definition of listening, the link between reception of the stimuli and meaning assignment is attention. Attending to includes concentrating, receiving, and selecting. The three components of receiving, attending
to, and assigning meaning together comprise the complete listening process. Attention is a key element in the process, creating an influence in several ways. According to the multistore view of information processing theory, if a stimulus in short-term memory is not attended to, it will decay in a period of 20 seconds to one minute. (Shiffrin & Atkinson, 1969). Attention is a limited-capacity resource, and people can only focus completely on one stimulus at a time. Concentration of attention on one stimulus increases the likelihood of rehearsal, facilitating commitment to the long-term memory system. Attention in this context requires both effort and desire (Wolvin & Coakley, 1998).

In addition, attention is selective. Although various views of how attention is allocated have been proposed (e.g., Deutsch & Deutsch, 1968; Triesman, 1960), all are in agreement that attention is flexibly allocated and selective. Kahneman's (1973) model claims that attention is distributed flexibly at three levels: (a) automatic, unconscious rules, (b) conscious decisions, and (c) the difficulty of the task. According to Kahneman, an individual can momentarily change his attention depending on varying attentional demands. Not only do a listener's frame of reference and perceptual filter affect the assignment of meaning to the sender's message, but they also influence exactly which information the listener will attend to in the first place. Listeners have a tendency to seek information that is consistent with their own personal beliefs, assigning meanings that conform to their personal expectations. They "tune in" to consistent information and "tune out" inconsistent information.
The attention factor is the most typical aspect of listening that has been studied in relation to classroom contexts. Miller and Weiss (1982) investigated developmental changes in knowledge about variables that affect selective attention. In a comparison of kindergartners, second graders, fifth graders, and undergraduates, they found that even the kindergartners understood that interest, age, order, and labeling were important factors affecting performance on a memory task. By second grade, 9 of the 11 variables suggested to affect selective attention were understood. The authors acknowledged, however, that children's knowledge about cognitive processes was ahead of their ability to apply the knowledge to their performance. Even though the younger children were able to identify factors that mediated attention, they were not able to translate the knowledge into appropriate strategies.

Pillow (1988) provided evidence that preschoolers may realize the limitations of attention. In tasks involving either puppets or tape recordings, four-year-olds chose to listen to one at a time, indicating that they understood the limits of attentional capacity. Three-year-olds originally chose to listen to both taped stories simultaneously, but were able to learn from their experience. Realizing that they were unable to answer questions about the stories heard at the same time, they later chose to hear the stories one at a time. Pillow interpreted this finding to suggest that ability to predict comprehension problems in advance follows knowledge of comprehension problems when attention limits have been exceeded.

In another study investigating preschoolers' knowledge about attention, Miller and Zalenski (1982) examined the variables of interest level and noise. They found that
three- and four-year-olds understood that both variables interfered with how much a child learns whether listening to someone talk or doing a quiet activity. It was suggested that this study tapped early knowledge about distraction, which even young children have experienced. These studies acknowledge that preschoolers possess rudimentary knowledge of attentional capacity and variables that influence it. Building on these basic understandings once children enter the primary grades should be an important goal of primary classroom instruction.

*Teaching Listening Strategies*

It has been said that 80% of what people know is acquired through listening, but that most adults' listening efficiency is only about 20% (Brent & Anderson, 1994). Such a finding suggests that practice alone does not improve the skill. Although the recent emphasis on reading and writing has crowded attention to listening out, it is contended by Swafford and Paulos (1993) that “listening deserves to receive attention of teachers and researchers as a necessary, integrated part of the learning process” (p. 401). Nonetheless, studies on listening skills of elementary children are rare.

Swafford and Paulos (1993) implemented a carefully designed experience in a first-grade classroom “to facilitate active listening within the context of content learning” (p 402). Elements of Choate and Rakes (1987) Structured Listening Activity were flexibly incorporated into the learning experience. The SLA elements, selected for their proven effectiveness in teaching comprehension, included: (a) activating and building background knowledge, (b) setting a purpose for listening, (c) reading aloud by
the teacher while highlighting visuals and encouraging students’ predictions, (d) asking questions during and after reading, and (e) summarizing the story. The listening experience was planned to provide children with a setting that enabled effective listening, rather than simply imploring them to listen. Unfortunately, no data and results were reported although the implication is that listening was improved as a result of the entire learning experience.

Another study of listening skills was conducted with a small sample of 20 second graders participating in an SRA Listening Skills program. The program was delivered by cassette tape with follow-up activities. Results of this study showed that 17 of the 20 students had significant improvement on the Language-Structured Auditory Retention Span Test at the end of the program. A larger study of 145 preschoolers investigated learning and social skills, including attending and listening (Brigman et al., 1999), embedded into the regular curriculum by the classroom teacher. The results suggested that preschool children can be taught attending, listening, and social skills that have been correlated with long-term school success.

Several articles that provide guidelines or strategies for developing good listeners were found in journals for teachers. Examples of a few that provided concrete suggestions are as follows. Funk and Funk (1989) listed four specific guidelines, including providing a purpose for listening, setting the stage for listening, providing for follow-up experiences to listening activities, and using methodology that promotes positive listening habits. Funk and Funk make a useful distinction between listening to
and listening for information. Levesque (1989) designed the ELVES read-aloud strategy to develop listening comprehension. In her program, the acronym ELVES stands for Excite, Listen, Visualize, Extend, and Savor.

Emphasizing the importance of teachers modeling good listening, Brent and Anderson (1993) also suggested providing both specific listening instruction and opportunities to practice through such channels as author's chair, reading aloud, writing workshop, and cooperative groups. Specific strategy instruction might include lessons on “watching the speaker, focusing to block distractions, visualizing, formulating questions, making mental associations, predicting while listening, summarizing, and taking notes” (p. 124). The keys to meaningful listening instruction, according to Brent and Alexander, are identifying the needed skill or strategy, teaching it effectively, providing supervised practice, reviewing strategies periodically, and offering assistance in selecting the most appropriate strategy in a given situation.

Jalongo (1996) also maintained that focused lessons on specific skills can improve young children's listening behavior. Jalongo, like Brent and Anderson, begins with the importance of the teacher providing a model for good listening skills to her students. Creating an effective listening environment refers to “efforts to help children focus, eliminate distractions, and overcome barriers to listening” (p. 22). Barriers might include physical conditions ranging from fatigue to room temperature; or psychological conditions such as attention span, interest, and self-esteem. Creating an effective environment might include setting up a quiet corner in the room for listening.
establishing special routines, using visual aids, or using procedures that minimize
distractions, such as asking children to close their eyes and imagine.

Setting a purpose for listening is included in Jalongo's list because it helps
children channel both their energy and concentration on meaning. Effective listening
requires clear communication on the speaker's part, and teachers must keep instructions
simple and organized, and anticipate possible sources of confusion. Keeping students
actively involved is another way of encouraging better listening according to Jalongo.
Asking questions that require response or reflection, such as restating, summarizing,
and self-assessment help to increase active listening. Finally, Jalongo suggested that
encouraging parents to work with their children on listening skills and incorporating
listening goals as part of the curriculum beginning in preschool are important ways to
influence listening in young children.

In schools, good listening is often construed in terms of observable behavior,
such as looking directly at the speaker and sitting quietly. Brent & Anderson (1994)
contend that these are not necessary conditions for good listening, saying that in the
classroom a good listener “is a student or teacher who gives complete attention to a
class presentation or any information presented orally” (p. 123). They contend that good
listeners can be sitting up or lying down, watching the speaker or closing their eyes, be
still or moving. What is important is that they are actively processing information,
making pertinent comments, and asking relevant questions.
Summary

The importance of being a competent listener in the school setting has been well established. A significant amount of learning is achieved through the listening mode. Listening is young children’s main source of information until they gain the receptive skill of reading, yet not much attention has been given to its development. Most teachers and parents rely on teaching children observable behaviors to improve listening skills. Effective strategies have been developed, however, that can improve children’s active listening skills.
CHAPTER 3

METHOD

"What is education but a process by which a person begins to learn how to learn?"
Peter Ustinov

Overview of the Study

The combination of quantitative and qualitative approaches provides richer data than possible with either approach alone. Using only one approach might provide either insufficient or incorrect data. Having the alternative approach can either validate the first or add to it in a meaningful manner (Tashakorri & Teddlie, 1998). When investigating an abstract variable such as self-efficacy in young children, collecting more data and a variety of kinds of data may lead to greater levels of trustworthiness.

Methodological triangulation, according to Tashakkori and Teddlie (1998), "involves the use of both qualitative and quantitative methods and data to study the same phenomena within the same study or within different complementary studies" (p. 18). Tashakkori and Teddlie (1998) list four specific mixed methods designs. The present investigation falls most closely under the category of parallel/simultaneous studies, meaning that both the quantitative and qualitative phases of the study were conducted at the same time. The research design includes a field experiment with interviewing integrated simultaneously. In addition, data collection includes both closed-ended items with numerical responses as well as open-ended items (Tashakkori
& Teddlie, 1998). Such research is purported to be useful in exploratory investigations based on research questions rather than on hypotheses, such as the current investigation.

In this mixed methods investigation, the use of the learning strategy of goal setting was investigated as a potential factor for developing self-efficacy and self-regulated learning in young children. A listening comprehension task provided the focus for the strategy implementation. All students participating in the study received lessons on active listening to improve their listening comprehension.

The study is considered to be quasi-experimental because students in intact classrooms were the participants. The dependent variables were students' performance on listening tasks and students' self-rated levels of self-efficacy. The independent variable had three levels: student-set goals, teacher-set goals, and no goals. The no goals condition served as a control group. The groups differed as follows:

Student-set goals. Students in this group were asked to make their own individual judgments as to how many questions they wanted to attempt to answer correctly for a given story.

Teacher-set goals. Students in this group recorded an assigned goal for correct answers for each story, dictated by the teacher. All students in the teacher-set goal group had the same goal for each story.

No goals. Students in the comparison group did not set or record explicit goals prior to hearing the stories.

A pilot study was conducted by the author over an eight-week period in three second-grade classrooms in a suburban school in the midwest in the spring of 2001.
Following the pilot study, two subtle adjustments were made. The order of some of the student interview questions was rearranged and distracters for some of the responses to story questions were rewritten for added consistency. Three research assistants conducted the study in the fall of 2001 in 18 classrooms. The research assistants were experienced female teachers in their 40s and 50s and not employed as classroom teachers at the time. Each research assistant was assigned to two schools, teaching three second-grade classes in each of the schools. The three levels of the study were randomly assigned to the three classes in each school, thus assuring that all three conditions were represented in each school. Thus, the research assistants each taught two classes at each level of the treatment.

To control for fidelity of implementation, the research assistants participated in training sessions during the summer, regular team meetings over the course of the study, and individual discussions with me as needed. I also observed each research assistant teaching at least two classes during the study. One all-day training session was held during the summer for all three research assistants together. During that time, they were familiarized with the study and the research questions, participated in a discussion of ethics and confidentiality, received an overview of materials and activities, and listened to sample interviews that I had audiotaped during the pilot study. In addition to the group session, I met individually with each assistant on several occasions over the summer to answer questions and collate and distribute student materials. Each research assistant also received a notebook that contained pertinent materials for each school she would serve. The notebooks contained exact scripts for several aspects of the study.
While the study was being conducted, biweekly team meetings were held with all the research assistants. These meetings included debriefings of the previous weeks’ sessions and plans for implementation of the following weeks’ lessons. By sharing and modeling plans, greater control of the teacher effect/implementation threat was achieved.

Participants

The study was conducted in an upper-middle class suburban district in the midwest. Education was a high priority in the community where 90% of enrolled graduates typically go on to higher education. Seventeen percent of the student population was culturally diverse. Of the district’s 11,996 students enrolled in the district in October, 2001, 545 were English-as-Second-Language students speaking 45 different languages. The sampling frame consisted of 10 schools from which six were selected based upon access through personal contacts either of myself or the research assistants. According to a report compiled by the district in the autumn of 2001 and presented to the State Department of Education, the percentage of minority and white students at the six participating schools is seen in Table 1. School #4 had the most diverse student population and School #6 was the least diverse. The other four schools were relatively similar in level of ethnic diversity.
Table 1: Percentages of minority and white students by school.

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>School 1</th>
<th>School 2</th>
<th>School 3</th>
<th>School 4</th>
<th>School 5</th>
<th>School 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian/Pacific</td>
<td>21.9</td>
<td>15.3</td>
<td>12.2</td>
<td>24.2</td>
<td>21.9</td>
<td>5.8</td>
</tr>
<tr>
<td>Black/Non-Hispanic</td>
<td>1.6</td>
<td>2.6</td>
<td>2.4</td>
<td>5.2</td>
<td>5.4</td>
<td>1.1</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1.0</td>
<td>3.0</td>
<td>.9</td>
<td>3.4</td>
<td>4.3</td>
<td>.5</td>
</tr>
<tr>
<td>American Indian/Alaskan</td>
<td>0</td>
<td>0</td>
<td>.1</td>
<td>0</td>
<td>.2</td>
<td>.3</td>
</tr>
<tr>
<td>Multiracial</td>
<td>3.0</td>
<td>5.6</td>
<td>2.4</td>
<td>7.7</td>
<td>4.0</td>
<td>3.0</td>
</tr>
<tr>
<td>Total Minority</td>
<td>27.6</td>
<td>26.5</td>
<td>18.0</td>
<td>40.6</td>
<td>26.8</td>
<td>8.8</td>
</tr>
<tr>
<td>White</td>
<td>72.4</td>
<td>73.5</td>
<td>82.0</td>
<td>59.4</td>
<td>73.2</td>
<td>91.2</td>
</tr>
</tbody>
</table>

Although all six schools were in the same suburban school district, some of the surrounding neighborhoods were of higher socioeconomic status in the community than others. Home prices in school attendance boundaries ranged from $130,000-$275,000 for School #2 to $175,000-$1,000,000 for School #5. Participants were 402 students from three second-grade classes in each of the six selected schools, a total of 18 classes in the district. Although all students in the selected classrooms were taught the listening strategies and participated as a class in the instructional portion of the study as an extension of the language arts curriculum, only data from students returning signed parental consent forms were included in the study.

Thirty of the students did not return consent forms and were consequently not included in the data collection. Fourteen students began the study but were not included in the final data set because of extended absence (7), schedule conflicts (6), or moving out of the district (1). Although English-as-Second Language students participated in the study, only data from those who were classified as Level Two or Level Three were included.
higher were included in the results. Level One students were excluded because their English language skills were not considered to be sufficiently developed to allow full participation in the listening tasks. Two students in the ESL Level One category were thus dropped from the results. The remaining 356 participants, 163 females and 193 males, were fairly equally distributed across the three conditions, with 116 students (53 females, 63 males) in the self-set goals condition, 120 students (57 females, 63 males) in the teacher-set goals condition, and 120 students (53 females, 67 males) in the comparison group.

Collective case study. A second level of participation, the collective case study, was extended to some students with the intention of obtaining a stratified purposeful sample (Patton, 1990). Stratified purposeful sampling was employed to select nine students for further observation and interviews. In order to gain a deeper understanding of the cognitive processes used by students of different academic levels, we selected cases from the high, medium, and low academic achievement groups as rated by their teachers. In addition, students were selected to represent both genders, all three goal-setting conditions, and a range of ethnic diversity.

Based on classroom observations and classroom teacher suggestions, each research assistant selected two to four students to interview on an individual basis, once at the beginning of the study and again at its completion. Students were specifically selected for their anticipated ability to be comfortable and articulate with the interviewer. It was also necessary to select students whose parents would be willing and able to be interviewed as well. An attempt was made to select students who represented
a range of diversity in gender, achievement level, ethnicity, and experimental condition.
Five of the selected students were female and four were male; five were rated as high
academic achievers by their teachers, two were rated medium, and two were rated low;
five were Caucasian, one was African-American, two were Middle Eastern (Iraqi and
Indian), and one was Filipino; and three were bilingual. Two students came from
classes in which students set their own goals, three came from teacher-set goals classes,
and four came from control group classes. See Appendix P for an overview of
characteristics of the nine interviewed students.

Student reading levels were based on scores attained at the end of first grade on
the Developmental Reading Assessment, or DRA (Beaver, 1997), a test individually
administered to students by their classroom teachers. The district had set a benchmark at
Level 18 for minimal competency in reading at the end of first grade. The highest level
that teachers used for assessing at the end of first grade was Level 28. Many children in
the district scored well above Level 28 at the end of first grade but were simply listed as
Level 28, making Level 28 a category of students with high reading achievement rather
than an exact reading level. A brief demographic profile of each interviewed student
follows. Pseudonyms are used.

Demographics of Interviewed Students

Janie: Caucasian female (7 years, 7 months), one of only 4 students rated as low
academic achievers by her teacher. Her reading level (Level 8 on the Developmental
Reading Assessment) was well below the minimum score of 18 established by the
school district for entering second graders.
Hussein: An Iraqi male (8 years, 0 months), rated as a high achiever by his teacher. He spoke both English and Arabic. He had reached the highest reading level administered to second graders in the district (DRA Level 28).

Mickey: Caucasian male (8 years, 2 months), rated as an average student by his teacher. His DRA level was 20.

Gavin: Male from India (7 years, 8 months), spoke both Hindi and Arabic at home but was more proficient in English. He was rated high academically by his teacher and had reached the top DRA Level of 28.

Cathy: Caucasian female (7 years, 10 months), also rated high by her classroom teacher. Cathy had also attained a DRA Level of 28.

Cara: African-American female (7 years, 7 months), rated medium by her teacher. Her DRA level was 24.

Jody: Caucasian female (7 years, 1 month), the only girl in her class who was rated as low academically by her teacher. Jody’s DRA level was 18.

Ron: Caucasian male (7 years, 8 months) rated academically high by his teacher, although his DRA level was listed as only 18.

Ann: Filipino female (7 years, 1 month) who spoke Tagalog in her home but was fluent in English. She was rated high academically by her teacher and had reached a DRA level of 28.

Initial student interviews were conducted by the research assistants upon receipt of parental consent and final interviews were held during the last week of the study. All 18 interviews were audiorecorded and transcribed for analysis. Transcribed
interviews were labeled with the participants’ identification code so that they could be compared with other quantitative and qualitative data received from the same participants.

Interviews with parents and teachers of the nine students were used to help analyze student responses. Parental consent forms for the first and second levels of participation are attached as Appendices B and C. Copies of suggested initial and final interview scripts are attached as Appendices D and E.

Structured interviews have limitations for data gathering. Because three different research assistants were conducting the interviews, however, the scripts served the purpose of keeping the interviews consistent so that responses could be compared more easily. The research assistants were instructed to make adjustments as necessary to fit the length of the interviews to varying attention levels of the students.

Following initial student interviews, a telephone interview was held with a parent of each student, and face-to-face interviews were held with each student’s classroom teacher. Suggested parent and teacher interview scripts are attached as Appendices F and G.

Materials

A number of instructional materials and recording instruments were used during each of the eight class lessons, and additional qualitative and quantitative materials were used during the pretest/posttest phases. The materials are described below.

Stories. Eight stories were selected from the “Sixteen Listening Skill Builder Selections” compiled and published in the Teacher’s Handbook of the SRA Reading.
Laboratory Level 1b, revised edition (Parker & Scannell, 1982), specifically designed for use with second-graders. After examining several other sets of stories, I selected this series because it provided multiple stories judged to be at an appropriate comprehension level and contained content considered to be interesting for second-graders. The selected stories were free of gender and cultural bias. Unlike several of the other potential series, the Listening Skill Builders were designed specifically for listening activities and not for reading. They were not being used by any of the teachers in the district for other purposes, reducing the possibility of familiarity to the students. In addition, 10 comprehension questions and possible answer choices accompanied each story. One example is attached as Appendix H.

The stories were similar in length, in terms of number of vocabulary items, and in terms of number of fictional characters and themes for recall (Johnson, 1982). Each story provided rich details for forming visual imagery. Story selection was also based on content largely outside children's everyday experiences and story unfamiliarity to students. Although reliability and validity measures for the Skill Builders were sought, they were unavailable from the company. Based on observations and student performance on the pilot study using six of the stories, however, the stories appeared to be at a relatively consistent level of difficulty, with the exception of two stories. The first story was consistently easier for the students and the fourth story was more difficult. Readability scores were not calculated until the conclusion of the study but were as follows:

106
Table 2. Readability scores for the eight stories.

<table>
<thead>
<tr>
<th>Story #1 — The Little Old Lady Who Used Her Head</th>
<th>91.6</th>
<th>3.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Story #2 — The Magical Months</td>
<td>80.1</td>
<td>5.2</td>
</tr>
<tr>
<td>Story #3 — The Singing Tree</td>
<td>81.5</td>
<td>5.6</td>
</tr>
<tr>
<td>Story #4 — Why the Fish Do Not Speak</td>
<td>79.0</td>
<td>6.2</td>
</tr>
<tr>
<td>Story #5 — The Crack in the Wall</td>
<td>86.7</td>
<td>4.7</td>
</tr>
<tr>
<td>Story #6 — Mr. Puffblow's Hat</td>
<td>89.2</td>
<td>4.2</td>
</tr>
<tr>
<td>Story #7 — The Porcupine's Dance</td>
<td>83.8</td>
<td>4.4</td>
</tr>
<tr>
<td>Story #8 — How Spider Got a Bald Head</td>
<td>87.2</td>
<td>3.9</td>
</tr>
</tbody>
</table>

To offset subtle differences that were expected to exist in the level of difficulty associated with the various stories, the presentation order of the middle six stories was counterbalanced across schools. This repeated-measures Greco-Latin Square design was planned as a control for possible differential influences between the stories and occasions of testing. The first and last stories were presented consistently across schools and conditions.

In addition, care was taken to vary the time of day when each of the conditions received the lessons. For example, schedules were arranged so that all of the “no goals” classes or all of the “student-set goals” classes did not receive their lessons first thing in the morning or last thing in the afternoon. Table 3 provides a schematic overview of the proposed story schedule and time of day of presentation. Although it was impossible to schedule classes exactly as shown in the schematic overview, care was taken to assure variety in time of presentation within the conditions.
<table>
<thead>
<tr>
<th>School</th>
<th>Time</th>
<th>Treatment</th>
<th>Story Order #1-8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sch.1</td>
<td>First</td>
<td>No goals</td>
<td>1 2 3 4 5 6 7 8</td>
</tr>
<tr>
<td>Sch.1</td>
<td>Second</td>
<td>Teacher set</td>
<td>1 2 3 4 5 6 7 8</td>
</tr>
<tr>
<td>Sch.1</td>
<td>Third</td>
<td>Student set</td>
<td>1 2 3 4 5 6 7 8</td>
</tr>
<tr>
<td>Sch.2</td>
<td>Second</td>
<td>No goals</td>
<td>1 3 4 5 6 7 2 8</td>
</tr>
<tr>
<td>Sch.2</td>
<td>Third</td>
<td>Teacher set</td>
<td>1 3 4 5 6 7 2 8</td>
</tr>
<tr>
<td>Sch.3</td>
<td>Third</td>
<td>No goals</td>
<td>1 4 5 6 7 2 3 8</td>
</tr>
<tr>
<td>Sch.3</td>
<td>First</td>
<td>Teacher set</td>
<td>1 4 5 6 7 2 3 8</td>
</tr>
<tr>
<td>Sch.3</td>
<td>Second</td>
<td>Student set</td>
<td>1 4 5 6 7 2 3 8</td>
</tr>
<tr>
<td>Sch.4</td>
<td>First</td>
<td>No goals</td>
<td>1 5 6 7 2 3 4 8</td>
</tr>
<tr>
<td>Sch.4</td>
<td>Second</td>
<td>Teacher set</td>
<td>1 5 6 7 2 3 4 8</td>
</tr>
<tr>
<td>Sch.4</td>
<td>Third</td>
<td>Student set</td>
<td>1 5 6 7 2 3 4 8</td>
</tr>
<tr>
<td>Sch.5</td>
<td>Second</td>
<td>No goals</td>
<td>1 6 7 2 3 4 5 8</td>
</tr>
<tr>
<td>Sch.5</td>
<td>Third</td>
<td>Teacher set</td>
<td>1 6 7 2 3 4 5 8</td>
</tr>
<tr>
<td>Sch.6</td>
<td>Third</td>
<td>No goals</td>
<td>1 7 2 3 4 5 6 8</td>
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<tr>
<td>Sch.6</td>
<td>First</td>
<td>Teacher set</td>
<td>1 7 2 3 4 5 6 8</td>
</tr>
<tr>
<td>Sch.6</td>
<td>Second</td>
<td>Student set</td>
<td>1 7 2 3 4 5 6 8</td>
</tr>
</tbody>
</table>

Proposed Story Schedule by School and Time of Day

**Key:**
Story #1 — The Little Old Lady Who Used Her Head
Story #2 — The Magical Months
Story #3 — The Singing Tree
Story #4 — Why the Fish Do Not Speak
Story #5 — The Crack in the Wall
Story #6 — Mr. Puffblow’s Hat
Story #7 — The Porcupine’s Dance
Story #8 — How Spider Got a Bald Head

Table 3. Counterbalanced story presentation schedule for six schools.
Student booklets. Each student received a booklet that contained answer sheets for all eight stories, compiled in the order of presentation for that particular class. The goal setting and recording sheets were in front of the answer sheets. The booklets, entitled My Listening Book, had covers illustrated with a boy and girl who appeared to be engaged in academic activities. The booklets were collected at the end of each session for accountability and then redistributed. Color-coding was used on the covers to facilitate organization. Booklets for students in all student-set goal classes were blue, booklets in teacher-set goal classes were green, and booklets in the control group classes were yellow.

The answer sheets were compiled in the booklet according to the counterbalanced story presentation order for each of the six schools. They were also color coded to the research assistants’ stories for ease of presentation and classroom management. That is, the teacher would read a story on a particular color of paper and could easily check to insure that all students were on the right page of answers if the page colors were the same.

Level 1b of the SRA listening program provided for structured choice of recall in sets of questions, instead of attempting to elicit free recall accounts; such an approach seemed appropriate. As published, however, the answer choices required some modification. The questions accompanying four of the selected stories were followed by just two answer choices, while the four other selected stories had three possible choices for each question. To add face validity, an additional distracter was written for each of
the questions that originally had only two answer choices. Thus, each of the eight stories was followed by 10 questions with comparable numbers of possible answers, making measurement more consistent and meaningful. In addition, answers that gave the choice of “Both a and b” were eliminated. New answer choices were rewritten for questions having such choices and all options of “Both a and b” were replaced.

Posters. Two posters were used in each classroom to promote student learning of the listening strategies. The first poster was a commercially-created poster that listed the typical “Rules for Good Listening” frequently identified by students and their teachers. The strategies on the commercial posters listed observable behaviors including “eyes are watching, ears are listening, lips are closed, hands are still, and feet are quiet.” In contrast, the second poster presented the list of cognitive strategies for active listening that was developed for the present study. The second poster was hand-created on colorful poster board so it would be as attractive as the commercial poster. Large, bold computer-generated letters listed the title, “Strategies for Good Listening: Using Your Head,” that were the focus of the listening lessons for the students. Six strategies were listed, and each of the strategies was highlighted with a colorful star.

The strategies, compiled from several articles on strategies for improving listening skills, included: (1) block out distractions, (2) make predictions, (3) form questions as you listen, (4) make pictures in your mind, (5) imagine that you’re really there, and (6) connect to what you already know. The research assistants shared and discussed the posters at the beginning of each class session.
**Recording sheets.** In addition to the answer sheets in the student booklets, students in goal setting conditions had bar graphs for recording their goals for each story. The recording sheets appeared in the front of the student booklets. The recording scale was based on “tower” scales used successfully with preschoolers by Daniels and Kalkman (1998). The goal graphs were towers of 10 blocks, as were the graphs for recording correct responses to the stories. Because second graders have typically had prior experience with bar graphs and are familiar with their use, bar graphs were viewed to be a viable measure. The goal graphs and graphs for recording the number of correct responses appeared side by side for each story so that students could easily compare their actual scores to their goals (see Appendix I). Students in the no-goals condition had only graphs for recording their actual number of correct responses for each of the eight stories. The squares on the graphs record for the control group were suitable for recording scores from 1-10, the total number of possible correct responses (see Appendix J).

**Pretest and posttest measurements.** Both qualitative and quantitative pretest and posttest measures were taken. Students’ written responses to open-ended questions regarding their knowledge and use of listening skills were gathered by means of pretest and posttest questionnaires. The questionnaires were read aloud to the students by the research assistants during administration, one item at a time. That is, the first item was read aloud and students were given time to respond before the second item was presented. This controlled for student variance in reading level. These questionnaires are attached as Appendices K and L.
In addition, two quantitative measures of self-efficacy were administered, a general measure and a task-specific measure. For the general self-efficacy measure, student responses on the quantitative pretests and posttests were recorded on bar graphs based on a 10-point scale similar to the goal and recording graphs (see Appendix M). The pretest survey included items developed for training students to use the graphs to record their judgments (see Appendix N). With the exception of the training items which were eliminated from the posttest surveys, the pretest and posttest surveys and recording sheets were identical (see Appendix O). The three questions regarding student efficacy for listening to stories read aloud at home, at school, and for understanding stories were used to compare general self-efficacy scores. The pretest and posttest graphs provided quantitative data relating to student changes in general self-efficacy over the course of the study.

In addition to the qualitative written open-ended responses to questionnaires and the quantitative general self-efficacy survey graphs, specific self-efficacy measures were also taken at the beginning and end of the study. Two additional stories were selected from the SRA Level lb listening program for the pretest and posttest; both were administered in identical fashion. During both the pretest and posttest sessions, all students listened to a story read aloud to their class by the research assistants. After reading the story, the research assistants used an overhead projector to show questions that accompanied the story. Without seeing answer choices, students were asked to record on a single bar graph, from 1-10, the number of questions they believed they would be able to answer correctly about the story they just heard. The answer choices
were never provided and students did not attempt to answer the questions. Instead, they predicted and recorded the number of questions they thought they would be able to answer correctly. Specific self-efficacy change scores were computed from the data collected from these pretest and posttest story/prediction tasks.

Procedure

Prior to beginning the study, consent forms were gathered and each classroom was observed by the research assistant who was working with that class. Observations took place during a read-aloud session with the regular classroom teacher in order to (1) familiarize the students and the researcher, (2) observe classroom teachers' methods of focusing and retaining students' attention, and (3) identify students who might fit into different strata for selection for the interview phase of the study.

Observation guides were provided for the research assistants (see Appendix Q). Student demographic data were gathered, including gender, date of birth, ethnicity, first language spoken in the home, and reading scores on first-grade standardized tests. Because the school does not give letter grades and no IQ scores were available for second graders, we had the teachers provide achievement ratings of high, medium, or low for each student, based on the students' classroom performance. At this time, schedules were also arranged with the classroom teachers. During the first week, students were selected for individual interviews and a second consent form was sent home with those who agreed.

The research assistants visited each classroom twice a week, for approximately 30 minutes per visit, for the next six weeks. The first and last weeks consisted of
pretesting and posttesting. The middle four weeks included the listening lessons and goal-setting activities. The following schedule was followed as closely as possible for each of the classrooms, although there were some minor adjustments due to scheduling conflicts that occurred either in the schools or with the research assistants.

**Week 1--Session I:** Research assistants administered training for the students on use of the recording scale, followed by administration of the general self-efficacy pretest. For the pretest, the research assistants read the five questions aloud and students were asked to record the magnitude of their response by coloring in squares on a bar graph. We wanted to ensure that all students understood how to use the bar graphs and how to record their levels of agreement to the questions before proceeding. Students were first given the opportunity to practice coloring in specified numbers on their bar graphs, starting from the bottom up. Instruction on the use of the rating scale for showing levels of agreement was then provided. Students were asked, "How much do you like to watch TV? If it's just a little tiny bit, color in just one square. If it's your very favorite thing to do in the whole world, way up at the top of your list, color in all 10. If it's just something that you like, but not a favorite, decide if it's closer to one or closer to 10. Color in the number of squares that shows how much you like to watch TV." Students colored in the number of selected squares and the teachers spot-checked several students, asking "How much do you like to watch TV?" and making sure that the colored squares matched their answer. This calibration activity continued until it appeared that all students understood how to color in the bar graphs from bottom up and
how to color in the number of squares that indicated their magnitude of response. The five general efficacy pretest questions were then read aloud, one at a time, and students proceeded to color in their responses on the bar graphs.

The qualitative open-ended pretest questionnaire (Appendix K) was also administered during the first session. The questionnaire consisted of five questions to which students were asked to respond in writing, after the research assistant read each one aloud.

Week 1--Session 2: Students participated in the specific self-efficacy pretest story as described above. That is, a story was read aloud to the students, followed by questions about the story. The students were asked to color in squares from 1-10 indicating how many of the questions they thought they would be able to answer about that particular story. By the end of Week Two, classes were randomly assigned to one of the three treatment conditions. In one case, a change was made to more equally distribute the three conditions of student-set goals, teacher-set goals, and comparison group for variation in time of day when the lessons would be taught.

Week 2--Session 3: Students in the goal-setting conditions were given individual recording sheets similar to the pretest rating scales from session two. They were reminded of how they marked their scales before and were told that they were going to hear a story and be asked 10 questions about the story after it was read. The first scale on their paper was labeled with the question, “My goal for Story 1.”
**Student-set goals:** Students in this group selected their own goals to record.

**Teacher-set goals:** Students in this group recorded the goal set for them by the research assistant. All students in the teacher-set goal group had the same goals. The assigned goals were incrementally increased over the eight stories using the following schedule: 6, 7, 8, 8, 9, 9, 10, 10.

**No goals.** The control group did not set or record goals during any story session. Their recording sheets included only one bar graph for each story and they simply recorded the number of questions they answered correctly on each of the eight stories as they were completed.

In all groups, the teacher read aloud the first story, “The Little Old Woman Who Used Her Head,” and then read the questions and answers aloud to the students, one at a time. The students underlined their responses for all 10 questions and then self-corrected their papers as the teacher read the correct answers aloud. Careful teacher monitoring was needed during this part of the procedure. During the grading portion, students were asked to put their pencils in their desks and use only crayons for marking answers correct or incorrect. The actual number of correct items was immediately recorded on the bar graph recording sheet for Story #1. This section was labeled, “Number I got right.” Students were then asked to check to see if they met their goal and class discussions followed.

**Week 2--Session 4:** During this session, the posters were presented for the first time and discussions ensued about the differences between active listening strategies and strategies for not bothering others. The importance of using the active listening
strategies, or "using your head" (see above), was stressed. Examples of how to enact the strategies were given. The second story was then presented, following the exact procedure as described for Story #1. Following the completion of recording correct responses on student graphs, a discussion was held about how students used the listening strategies and the goal-setting strategy. During the second week, the teacher began to conduct the initial interviews with the selected students who had returned consent forms.

**Weeks 3 to 5—Sessions 5 to 10:** Each session began with a review of the six cognitive listening strategies, and in the treatment groups, a discussion of goals. Students in the goal-setting groups recorded their goals on their recording sheets according to their treatment group, either setting their own goals or recording the goal set for them by the teacher. The story procedure was repeated with a different story each session, according to the story schedule in Figure 4. During these weeks, interviews with parents and teachers of interviewed students were conducted. Parent interviews were held primarily by telephone and were not audiorecorded, but responses were written on the interview guides by the research assistants. Teacher interviews, except for one, were conducted face-to-face and responses were written on the interview guides by the research assistants. One teacher took the interview guide home to complete, saying she thought she would be more thorough in doing so.

**Week 6—Session 11:** The posttest of quantitative general self-efficacy questions (Appendices M and O) recorded on bar graphs, and the second open-ended written
questionnaire (Appendix L), were administered to all students in the identical format to the pretests. The second round of student interviews was conducted and recorded.

*Week 6–Session 12:* The specific self-efficacy posttest was administered. A final story was read aloud, and as in the specific self-efficacy pretest administered during the first week, students were shown 10 related questions on an overhead and used a 10-square bar graph to color in the number of questions they believed they could answer correctly. As in the pretest, the answer choices for posttest questions were never provided and students did not actually attempt to answer the questions. Instead, they merely stated the number of questions they thought they would be able to answer correctly if asked to do so.

At the conclusion of the 12 sessions in the classrooms, the data collection activities were completed. A summary of weekly activities to be performed by the research assistants is included in Appendix R.

*Reliability Measures*

Several procedures were implemented to improve reliability, especially in terms of data collected from students. We double-checked students' recording in three ways. The student booklets were collected at the end of each class session and the research assistants completed the first check. First, the answer sheets were checked to be sure that students had been diligent and accurate in keeping track of correct/incorrect responses. Second, the number of correct responses counted by the student was verified.
Third, the bar graphs were checked to confirm that students had recorded the correct numbers. Any errors in scoring or recording that had been made by students were corrected by the research assistants.

Another reliability measure for student response was elimination of recording sheets that used the same writing tool for both processes of recording and scoring. Prior to responding to each story, the students were specifically instructed to mark their correct responses in pencil. When the questions had all been read and answered, students again were instructed to put their pencils in their desks and get out a crayon for scoring their answer sheets. If a student used pencil for both marking correct responses and for scoring the answer sheet, the story was eliminated from the data set and recorded as if the student had been absent. Likewise, if the student used crayon for both responding and scoring, the results were eliminated. The procedure was put in place to reduce the chance of accepting unreliable data resulting from students changing answers during the self-correction procedure or completing answers they had originally left blank.

Following completion of the data collection period, several team meetings were held so that response booklets could be traded among the research assistants and a second check for accuracy made for each of the eight stories in all student booklets.

Data Analysis

The study was exploratory in nature and the assessment instruments were untested. Multiple instruments were used both quantitatively and qualitatively to collect as much information as possible. Findings from one instrument to another and one
methodology to another did not always corroborate each other and analysis was complex based on the unstable responses that were given by the young children who participated in this study.

Quantitative. Prior to conducting my analyses, I made sure that all of the variables under analysis met the assumptions of the various statistical techniques (e.g., homogeneity of variance). In addition, I closely examined the descriptive statistics and delineated any trends in these data.

To address research question #1 regarding the extent to which the use of a goal-setting strategy influences actual task performance, I conducted a multivariate analysis of variance (MANOVA), with condition (teacher-set, student-set, no goals) as the between-subjects variable and time (pretest, posttest) as the within-subjects variable [3(condition) x 2(time)]. Student scores on Story #1 and Story #8 were used as the pretest and posttest measures.

Research question #2 pertained to the extent to which a goal-setting strategy affects student self-efficacy for a listening task. Specific self-efficacy was measured by students’ beliefs about how many of 10 questions they could answer after listening to a specific story. General listening self-efficacy, students’ beliefs about how well they listen to stories, was measured by student responses to three questions, each answered on a 10-point scale. The three items were: (1) How good are you at listening when someone at home is reading a story to you? (2) How good are you at listening when someone at school is reading a story to you? and (3) When your teacher reads a story out loud, how good are you at understanding what it is about? The sum of the scores for
the three items comprised the students’ general self-efficacy scores. I conducted a MANOVA with condition (teacher-set, student-set, no goals) as the between-subjects variable and time (pretest, posttest) as the within-subjects variable [3 (goal) x 2 (time)].

Qualitative. The qualitative data gathered from this investigation were collected at two different levels. The first level involved the classroom and all the participating students. Initial and ongoing observations provided field notes on listening strategies employed by classroom teachers to encourage good listening during a read-aloud activity as well as overall student reactions and responses to these strategies. Open-ended written responses to the pretest and posttest questionnaires were collected from all students. Examination of these data led to a deeper understanding of how second-grade students come to an awareness, or not, of how they can improve their own performance by adopting specific learning strategies. Any signs of increased efficacy for listening to stories were sought.

On the second level, more in-depth data were gathered from nine students who were selected to participate at the individual level via interviews. According to De Groot (2002) “interviewing can be a useful method for gaining a better understanding of people’s experiences and the meaning of these experiences to them, and the dynamic interplay between individuals and contexts” (p. 42). Transcriptions of two audiotaped interviews with each of the nine students, along with questionnaires based on interviews with teachers and parents of the students, were available for analysis.

Field notes collected from observations of these case study students included noticeable behaviors during preliminary observations, behavior during listening lessons...
and stories read aloud, and any pertinent comments made by these students in class related to the effectiveness of goal-setting, listening strategies, or their improved self-efficacy. Observations of the classroom teacher engaging in a class listening activity prior to the initiation of the study were also used as background information.

Observations have both advantages and disadvantages. While seeing what a student does rather than hearing what he says he does may be a better representation of reality, awareness of being observed sometimes can lead to unintentional changes in the participants' behavior. In addition, each observer views the situation from her own personal lens. With three different research assistants involved in the observations and interviews, the level of personal bias was exacerbated. Using student, teacher, and parent interviews provided a variety of sources of data for triangulation. Parent and teacher interviews were held for the purpose of corroborating evidence obtained from students concerning their perceived listening skills and sense of personal agency in school. Using parallel mixed analysis (Tashakkori & Teddlie, 1998), comparing the qualitative data from the case study students to their corresponding quantitative data, provided another method of triangulation.

The qualitative data from both levels of the study, general participation and collective case study, were analyzed by developing categories or themes that arose as the data were gathered and examined. Matrices were designed to categorize themes by school, gender, academic rating, and condition. Transcribed interviews were color-coded to highlight sections related to identified themes, including knowledge of listening strategies, use of strategies, reference to goal setting, and reference to self-
efficacy. An analysis of accumulated data was undertaken to determine if patterns emerged that gave evidence of students' changes in their sense of self as agent as they acquired competence in listening strategies. Changes in levels of self-efficacy were interpreted and compared across goal groups, gender, academic ratings, and school.

Several techniques were implemented to gain trustworthiness for the study. As data were gathered and themes began to emerge, the research assistants were asked to act as peer debriefers and corroborate interpretations. When available, classroom teachers were also enlisted as peer debriefers. Five reviewers, including two university colleagues, two of the research assistants, and one classroom teacher, read the drafts and provided member checks for adherence to the described protocol. I kept a research journal in order to track my personal expectations and monitor my personal subjectivity. Lincoln and Guba (1989) suggested that researchers record their prior constructions in addition to recording developing constructions during the study. Thick description, based on the analysis of the accumulated data, will help to “ensure confirmability of the constructions and reconstructions” (Raymond, 2000) of the experiences of the students in the study.

Research ethics

All participants were solicited as a result of informed consent. Prior to initiation of the study, all participants and their parents were asked to sign a consent form approved by the Institutional Review Board of the University. Students who were selected for the second round of the study, including the individual interviews, were first asked if they wished to participate at that level. The second level consent form was
sent home to their parents only if they agreed. There was no deception involved in the study. In addition, every attempt was made to respect the privacy and confidentiality of the participants. All students were assigned an identification number and individual information was kept confidential. Students' names were changed in the final research report. Access to a copy of the final written project will be made available to any interested parent, guardian, classroom teacher, or research assistant upon request. Every attempt was made to provide an unbiased, objective, and representative account of the findings to the greatest extent possible.
CHAPTER 4
DATA ANALYSIS

“Minds are like parachutes. They only function when they are open.”
Sir James Dewar

The purpose of the study was to investigate whether using a goal-setting strategy, with either teacher-set or student-set goals, affected second-graders’ performance on a listening task and their efficacy for a listening task. Both task-specific and general self-efficacy for listening were investigated. Quantitative and qualitative data were analyzed to address the research questions. In this chapter, I begin by presenting and analyzing the quantitative data. Interpretations derived from the qualitative data follow.

Quantitative Analyses

In order to verify accuracy of the accumulated quantitative data, several stages of data verification were used. All student answer sheets and recording sheets were checked for accuracy both by the administering research assistant and by a second research assistant or myself and corrections were made as needed. Seven students who missed three or more of the listening stories were eliminated from the data set. Summary sheets of recorded data were double-checked after they were completed. Data were also checked for accuracy upon entry into the database.
Preliminary Analyses

Prior to analyzing the data in relation to each question, three steps were taken. First, analyses were done to ensure that the data met the assumptions requisite for the various statistical procedures (e.g., homogeneity of variance). In addition, I conducted Crosstabs analyses on the characteristics of gender, teacher-ranked achievement level, school attended, and research assistant to analyze categorical equivalency across the three conditions (Table 4). The analyses revealed no significant statistical findings for gender, teacher ranking, school, and research assistant. No relationships were found between these variables and the experimental conditions.
<table>
<thead>
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Table 4. Distribution of student characteristics of gender, teacher ranking, school attended, and research assistant by condition.
Finally, I wanted to verify that there were no statistically significant group variations in students' performance or self-efficacy due to gender, teacher ranking, school of attendance, or research assistant. Because three different research assistants conducted the instruction, it was important to verify that no statistically significant differences occurred between the conditions as a result of implementation variations. There were minimal differences in the groups by condition on the pretests so change scores were calculated for performance, specific self-efficacy, and general self-efficacy by subtracting the posttest score from the pretest score (Campbell & Stanley, 1969). These change scores were used to more closely examine the influences of the four between-subjects variables. Multivariate analysis of variance (MANOVA) was conducted with gender, teacher ranking, school, and research assistant as between-subjects variables [2(gender) x 3(ranking) x 6(school) x 3(research assistant)] and change on specific self-efficacy, general self-efficacy, and performance from Story #1 to Story #8 as the within-subjects variables. Using Wilks' criterion, the results of this analysis revealed no statistically significant main effects for gender, teacher ranking, school of attendance, or research assistant (Fs≤1.244, ps≥.282). Descriptive statistics for student scores on pretest, posttest, and change measures appear in Table 5.
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<th>Variable</th>
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<td>9.31(3.74)</td>
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<tr>
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<tr>
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<td>6.70(3.06)</td>
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<td>120</td>
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<td>7.70(2.72)</td>
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<td>7.64(2.99)</td>
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<tr>
<td>Pretest</td>
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<td>2.39(5.97)</td>
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Table 5. Descriptive statistics for pretest, posttest, and change scores on task performance, specific self-efficacy, and general self-efficacy by condition.
Effects of Goal Setting on Performance

The first research question addressed how using a goal-setting strategy affected student performance on the listening task. Unfortunately, problems surfaced during the analysis that made it clear that it was not possible to address this question. The original intention was to assess performance by measuring mean change in correct answers from Story #1 to Story #8, but Story #1 had the highest number of correct responses across all conditions compared to all the other stories. Certainly, this result was unexpected given that the literature provided with the stories suggested that all stories were written for second-grade students with little variation in readability. Given these unexpected results, however, I felt it was necessary to seek an outside index of readability. I used Microsoft Word to compute readability statistics for each of the stories. The readability statistics included a Flesch Reading Ease score and a Flesch-Kincaid Grade Level for each of the stories, as shown in Table 2. Readability scores revealed that Story #1 had the lowest readability level, followed by Story #8. The high performance of all students on these two measures precluded the possibility of using Stories #1 and #8 as pretest/posttest measures for performance (see Figure 4).
I then considered using the scores from the first and last counterbalanced presentations (i.e., Stories #2 and #7) to assess performance, but such a comparison would not be valid because these stories were counterbalanced. No two schools used the same story at either point in time. The varying readability level for the stories at each of the schools eliminated any value of comparison at these time points.

**Effects of Goal Setting on Self-Efficacy**

The second research question addressed how a goal-setting strategy affected students' self-efficacy for listening. One part of the question addressed the effects of goal setting on specific self-efficacy, or students' beliefs about how many of 10 questions they could answer after listening to a specific story. The second part of the
question addressed general listening self-efficacy, or students' beliefs about how well they listen to stories read aloud. General self-efficacy for listening was measured by adding the scores of students' responses to three questions, each answered on a 10-point scale. The sum of the scores for the three items comprised the students' general self-efficacy scores.

To address the question, I conducted a repeated measures MANOVA with condition as the between-subjects variable and time as the within-subjects variable [3(condition) x 2(time)]. Results of this analysis showed statistically significant main effects for time only \[F(2,343)=23.69, \, p<.0001, \, \eta^2=.123\].

Univariate ANOVAs indicated that both specific self-efficacy \[F(1,343)=29.23, \, p<.0001, \, \eta^2=.08\] and general self-efficacy \[F(1,343)=24.17, \, p<.0001, \, \eta^2=.07\] increased across all conditions over time. An examination of the means and standard deviations of both specific self-efficacy and general self-efficacy in Table 5 shows increases in student efficacy from the beginning of the study to the end in each of the three conditions, whether goals were used or not. At the same time, standard deviations decreased on both measures in all three conditions, possibly indicating that student efficacy beliefs were becoming more stable.

Goal setting was not found to have statistically significant effects on students' self-efficacy. Even though all groups improved in self-efficacy, goal setting was not associated with significantly greater increases in self-efficacy. It appears that although goal setting itself did not significantly increase self-efficacy, the students' efficacy nevertheless benefited from some aspect of the study. The students' self-efficacy
Improvement over time for all three conditions must therefore be attributed to other sources than the goal-setting strategies. Three potential sources for the improvement are the listening strategies that were taught to all three of the groups, the practice effect, and maturation, which occurred equally among the three groups.

Qualitative Analyses

Qualitative data were collected on several different levels. All participating students completed open-ended questionnaires during the first and last weeks of the study. The questionnaires are attached as Appendices K and L. The research assistants collected data from observations in the classroom and recorded relevant comments made by students during the lessons. In addition, a collective case study was implemented in an effort to gain more in-depth understanding of how different children process information. Nine students were selected by the teaching assistants to participate at the interview level. Selection was based on classroom observations and classroom teacher input, according to the criteria described in Chapter 3. In addition to the two interviews with each student, the teacher and a parent of each of the nine students were also interviewed by the research assistants, either face-to-face or by telephone. A brief description of each of the nine students follows.

Profiles of Interviewed Students

See Appendix P for an overview of student characteristics, school, and goal conditions. The following section provides additional information about each student gathered from parent and teacher interviews. Although scripted interview guides were provided for the research assistants to use in the parent and teacher interviews, they
were used at the interviewers’ discretion. Some informants gave more information than others so the following information is not consistent across participants.

**Janie.** Janie had four older brothers, ranging in age from 11 to 19, at least two of whom had been formally identified as learning disabled. According to Janie’s teacher, Janie’s mother was aware that Janie had learning difficulties much like her brothers. Janie’s teacher indicated that she would probably pursue testing for special education placement (LD) for Janie during the current school year. The teacher stated that Janie tried hard but sometimes had difficulty understanding directions that were given orally in the classroom. Janie’s mother had become involved in classroom volunteer work for the first time with her daughter. She stated that her educational goals for her daughter were to “become a better student, be more attentive, and be more focused on her work even when distracted.” Janie’s teacher believed that Janie may be working above her potential because she always tried so hard. Her class was a control group class so she did not participate in goal setting during the study.

**Hussein.** Although Hussein was born in the United States and spoke English fluently, his family came from Iraq and his mother stated that it was very important for him to keep up with his native language. Hussein attended Arabic school on Sundays and did all his homework for Arabic school in that language. His mother also encouraged him on a regular basis to repeat sentences in Arabic although it was more difficult for him. Hussein’s teacher said he was “pretty good” at listening in class but sometimes got distracted and had to be refocused. His mother agreed that he could get distracted at home, too, but that he listened when she reminded him. His mother stated
that her goals for her child were to be in the top 10-15 students in his high school class and that he would go to college and “have a degree in something he likes and in a field that has a good future.” Hussein’s class set their own goals during the study.

**Mickey.** Mickey attended School #6, a school in the upper socioeconomic status area of the district. His teacher felt that he had some “trouble spots,” especially in listening to directions, but stated that he was a rule-follower and was able to look around and figure out what to do by watching others when he did not understand. On several occasions, his teacher had needed to remind him about listening and following directions. Mickey’s mother expressed that of their four sons, Mickey was the one whom she and her husband worried about the most as far as academic performance. The parents expected their sons to all “make it through college.” His mother said that they would like for Mickey to “be an A/B student and try to be the best that he can be.” Mickey’s class was in the control group.

**Gavin.** Gavin’s family was from India and spoke both Hindi and Tamil in the home, as well as English. Gavin’s mother stated that Gavin had “shifted about 70% to English and will have a problem when we go to India.” Gavin did not qualify for ESL services at school because of the development of his English skills. His teacher stated that he was a good listener in school and his mother agreed that he demonstrated good listening skills at home. His mother’s expectations included college or “whatever his interests.” Gavin’s class was in the control group and did not participate in goal setting.
**Cathy.** Cathy was considered to be a good listener by her teacher. Her teacher attributed much of Cathy’s school success to her good listening skills. Cathy’s parents were supportive of her academic endeavors and had high expectations for their daughter’s future success. Cathy’s class was in the control group.

**Cara.** Cara attended School #4, the school with the most diverse student population in the district. Her teacher stated that she was a very responsible student with good listening skills who loved to listen to read-alouds. Her parents were noted to be supportive of Cara’s academic performance. Cara’s father reported that Cara exhibited good listening skills at home and was eager to communicate her positive school experiences with her parents. Her father stated that at this point Cara had expressed an interest in being a veterinarian and knew that it entailed college. Her father’s goals were just that he wanted her “to do well and see how it goes.” Cara was in a class that had teacher-set goals.

**Jody.** Jody’s teacher indicated that her listening skills were poor in school and that she needed frequent redirection. Jody’s father agreed that Jody was quite prone to distraction, even tuning out and looking away when spoken to at home. Her father stated that Jody appeared to like school but mentioned that the teacher sometimes got mad at her for not paying attention and talking to other children. They had tried to work on improvement in these areas at home. Jody’s father wanted her to “complete high school” and “be happy.” He went on to say that if college interested her, they’d like her
to go but it was fine if she chose not to. He stated that he did not believe in exerting pressure and would help to direct her but not force her to do anything. Jody was in a student-set goals class.

*Ron.* The research assistant described Ron as a “very laid back child” during classroom observations and the interviews; his mother, however, described him as a worrier who broke out in hives during the first few days at his new school. Ron’s teacher described him as a bright and quick learner who usually accomplished tasks at or beyond expectations but needed occasional reminders not to talk during a lesson. Ron’s mother agreed that he was a high achiever but expressed concern that his motivation varied with his interest level. She stated that he often did not care if he missed questions and sometimes expressed boredom with schoolwork. If college was what Ron wanted, Ron’s mother said she would encourage it. Ron was in a teacher-set goals class.

*Ann.* Ann’s teacher said she was a very good listener and believed that her strong listening skills helped her to succeed academically. The teacher noted that Ann’s parents were supportive and expected her to do well in school. Her mother said that Ann had benefited from having an older sister who performed well in school. The two sisters spoke English together at home and the sister helped Ann learn to read. Ann’s parents expect her to go to college and encourage her to “set her sights high, like being a doctor.” Ann was in the same teacher-set goals class as Ron.
Additional qualitative information was gathered by teacher observation prior to the initiation of the study and during the course of the study. All participants completed open-ended questionnaires during the first and last weeks of the study.

Adoption of New Listening Strategies

Offering instruction on listening strategies to all three groups in the study made it possible to explore the adoption of similar strategies across all 356 students, an advantage not available when investigating the three goal-setting conditions independently. Student adoption of the listening strategies may have impacted both performance and efficacy for the listening task. It seemed important to investigate the extent to which students were able to discuss or demonstrate their acquisition and use of the new strategies in order to facilitate an understanding of the impact of explicit strategy instruction. The listening strategies were the focus of instruction for all three conditions. An analysis was conducted on all student responses in order to investigate how the second-graders changed as a result of being taught the specific active listening strategies.

Written responses. On both the pretest and posttest open-ended questionnaires, students were asked for a written response to the identical question, “What are some things you know to do in order to be a good listener?” To organize the data, individual matrices were formed for each school. The matrices are attached as Appendix S. Responses were additionally divided into condition and gender as well as school
performance categories of high, medium, and low. Responses were coded as
"Observable behavior," "Active Listening behavior," or "Unknown/irrelevant" for both
pretest data and posttest data.

As anticipated, on the pretest all but three of the 356 respondents listed physical
and observable behaviors of the kind typically taught in classrooms in order to maintain
group control. Most prevalent among these were variations of such behaviors as "look
at the person who is speaking," "be quiet," "raise your hand if you want to speak," and
"keep your hands and feet still." Many simply said "listen," while others were more
specific saying such things as "do not goof around with your friends," "sit down," or
"sit up straight." Some responses were not relevant to the question, such as "abc order,"
"be nice to others," and "help others and be a good friend." Only three responses
seemed likely to refer to active listening behaviors of benefit to the individual rather
than expediting the listening of the entire group. Those included "pay attention," "try to
understand," and "ignore other people so you can hear."

The posttest was given after four weeks of training on the listening strategies.
Analysis of student responses on the posttest was rather surprising, particularly in
regard to students' general lack of acknowledgement and attribution of success to the
use of the active listening strategies. The focus of the eight lessons was on strategies
"for using your head" and the six strategies had been reviewed and discussed at the
beginning and end of each of the lessons. In addition, the posters listing the six
strategies were always displayed when the listening lessons were being conducted.
Yet the number of students who referred to the strategies on the posttest in response to question #1 remained low. Active listening strategies were referred to by only 125 of the 356 students (35%).

The majority of students who did name an active listening strategy (73) said “block out distractions,” the first strategy listed on the poster. “Make predictions” was mentioned by five students, “form questions as you listen” was named twice. 29 students referred to “make pictures in your mind,” 26 said they would “imagine that they’re really there,” and only seven mentioned “connect to what you already know.” Several other responses were coded in the category of “Active Listening” because they either referred to the strategies in general or to the idea that using your brain is the important ingredient of active listening. Examples in this category include such responses as “use your listening strategies,” “the posters,” “concentrate,” “use your brain” and “know the tips.” The total number of strategies listed is higher than the total number of students mentioning strategies that were coded as “active listening” because some children listed more than one.

The next questions investigated were whether more girls than boys referred to the strategies and whether or not the students’ teacher-rated performance level made a difference in students’ responses. Of the 125 students who mentioned active listening strategies, 64 were girls and 61 were boys, representing 38% of the total female participants and 31% of the total males. Of these same 125 students, 46 were rated high
by their teachers, 59 were medium, and 20 were low. These numbers represent 44% of the total number of students rated as high, 33% of the total medium students, and 26% of the total low students.

The most impressive pattern that emerged from the matrix of responses was the difference in number of responses listing active listening behaviors by school. The numbers were as follows: School 1—33 (54%), School 2—19 (36%), School 3—5 (10%), School 4—2 (3%), School 5—35 (62%), and School 6—31 (49%). These numbers become interesting when it is known that the six classes in Schools 1 and 5 were taught by the same research assistant, the six classes in Schools 2 and 6 were taught by a second research assistant, and the six classes in Schools 3 and 4 were taught by a third assistant. It seems more than a coincidence that some of the variance must be due to the delivery of the lessons by the different teaching assistants. I had observed each of the teaching assistants during at least two of their class presentations and did not note any major differences other than the inevitable differences in teaching style, with one exception. The teacher at Schools 3 and 4, where student references to the active listening strategies was extremely low, asked that students recall the six strategies from the poster in the exact order that they were listed rather than emphasizing the importance of the strategies themselves. The results raise the question if this in itself was enough to detract from the importance of the strategies for these students or if other unobserved minor deviations also played into the discrepancy between teaching assistants. Such a discrepancy exemplifies the messiness of classroom research.
One can conjecture as to why the number of students who mentioned the listening strategies on the posttest as an aid to remembering was so low. Perhaps the students have heard the familiar entreaties to “put your eyes on the person who is talking,” or “keep your hands and feet to yourself” so frequently during the course of their formal education that those directives automatically come to mind when second graders are asked about being good listeners. The students refer to the familiar observable types of behavior before they have time to engage in deeper thinking that would conjure up the newly learned strategies. Perhaps the length of time between pretest and posttest, just six weeks, was short enough that pretest sensitization created a propensity toward repeating what was written in response to the same question. It is also possible that the vocabulary of the old strategies seemed simpler to write down to the beginning second graders who had just returned to school after summer break. The vocabulary and concepts of the active listening strategies were less concrete and more complex than the simpler observable behaviors that children had heard many times before. It is easier to write “look at the person who is talking” than it is to write “block out distractions.”

Although many of the questions on the pretest and posttest focused on students’ knowledge and use of the listening strategies rather than on goal setting, student responses to the explicit strategies nevertheless gave insight as to how strategies are internalized and adapted by children at the second-grade level. The findings from student questionnaires from all three conditions were based on similar experiences with listening strategies across all 18 classrooms, while only one-third of the students set
their own goals for answering questions, one-third was assigned goals by the teachers, and one-third had no goals. Because all three of the conditions shared comparable experiences with the listening strategies, it enabled more comparisons between groups than would have been possible if the focus had been on goal setting. The control group would not have had the opportunity to participate at that level.

*Interviews.* Although the analysis of overall student references to observational versus active listening strategies does not directly relate to the specific research questions, it nevertheless leads to a better understanding of how students adopt, or fail to adopt, new strategies that are presented in an explicit way over a period of time. The interviews provide a more in-depth investigation to the level of metacognition that the nine selected students were able to articulate during probes, accentuating the high degree of individual differences that are present in typical classrooms. The individual interviews with select students thus became useful in helping to analyze student written responses on the questionnaires. Although generalizations are not possible from the responses of the nine students, their individual interviews do provide a deeper look at the thinking that students’ used when answering the questionnaires. Some of their responses corroborated the conjectures mentioned above.

Gavin is the best example. On his posttest questionnaire, Gavin had written that in order to be a good listener you should “Be quiet, use your ears and not your mouth,” both observable behaviors. In his posttest interview, however, it was evident that he had learned a lot about the strategies.
Int: What are some strategies you know that can help you to be a better listener?
Gavin: (long pause) . . . u h . . . just block out distractions. You can close your eyes to do that./This is an insight to students who have been told so often to look at the speaker./
Int: Okay.
Gavin: And . . .
Int: Any thing else?
Gavin: Yeah . . . and if . . . and imagine you’re really there.
Int: Oh! Okay. Imagine you’re really there. That’s a helpful one. What else?
Gavin: Uh . . . connect to what you already know.
Int: Okay! That’s a good one, too. What . . . do you know any others?
Gavin: Ummmm . . .
Int: Any other strategies?
Gavin: Uh, there’s . . . (long sigh). . . make pictures in your mind.
Int: Yes, that’s always helpful! My goodness!
Gavin: Make . . . okay, make predictions.
Int: Um hum. I think . . . Did you say that one?
Gavin: Yeah, and then you form questions in your mind.
Int: Oh, my goodness. /The interviewer is impressed that Gavin has listed all six of the strategies./ All right, do you use all of those?
Gavin: Yeah.
Int: Great! Can you tell me about how you might use one of those strategies or how you use your strategies?
Gavin: . . . (long breath) I . . . if it’s a good story to use, I use it.
Int: Okay . . .
Gavin: Like . . . if, if . . . if it’s a really, if it’s a really neat story I imagine pictures, imagine you are there.

Not only was Gavin able to list all six of the strategies but he also expressed conditional knowledge that indicated he knew when a strategy would be appropriate. He had benefited from the instruction on active listening strategies, even though there was no evidence of his learning in the writing he had produced on the posttest.

Jody’s responses were quite different. On the written posttest questionnaire, Jody wrote “I listen to the teacher” in response to what she knew about being a good listener. Further probes during the second interview were unsuccessful in helping Jody to recall any of the strategies that had been taught over the previous four weeks.
Int: What are some strategies that you know now that can help you to be a better listener?

Jody: To listen when somebody’s reading, don’t look off anybody’s paper, and just do what you can do.

Int: Good. Have you tried these strategies before?

Jody: Yes.

Int: Okay, tell me about some of them.

Jody: Um, um, I accidentally looked off, looked off somebody’s paper and Mrs. Smith told me that, um, if you look off somebody’s paper you can cheat and you won’t know anything. So, if you cheat, you don’t know anything. So I stopped cheating and I moved on to not cheating, and I learned how to do it myself, and I didn’t know how to do pluses, so I looked off Laura’s paper, so I quit doing it ‘cause now I know what plus means. Three plus three equals six, I, all I have to do is look off my fingers, one, two, three, four, five, six. [Jody has lost track of the question and is off in another direction. The interviewer attempts to get her back on task.]

Int: Okay, so you used those strategies to help you, um, learn to add, right?

Jody: Yeah.

Int: Very good. Okay, did, did the strategies with listening, did any of them that I talked to you about help you?

Jody: Yes, it did.

Int: Can you tell me about any of them?

Jody: Um . . . (long pause while thinking)

Int: That helped you?

Jody: The story that you first, um, read to us, I got them all right because I used the listening strategies, and I felt pretty good.

Int: Okay, can you tell me about any strategy that you used that you thought was especially helpful?

Jody: The one that I really liked of the strategies was not to cheat ‘cause I didn’t learn anything from the pluses ‘cause I looked, looked off Laura’s paper.

Even after a few more probes, Jody did not mention any of the listening strategies that had been the focus of the research assistant’s visits to her classroom over the previous four weeks. Gavin and Jody represent the opposite ends of the continuum in their levels of recall and reference to the listening strategies, with Gavin mentioning all six and expressing conditional knowledge. Jody seemed oblivious to the listening strategies, even with the presence of numerous hints.
Although it would be tempting to believe that Jody’s lack of reference to the new strategies was related to her low academic rating by her teacher, Janie’s interview does not support such an interpretation. Janie, like Jody, was rated as a low achiever by her teacher but Janie’s interview confirms that Janie did learn the strategies to a certain degree.

**Interview Excerpt**

**Int:** What are some strategies you know that can help you be a better listener?

**Janie:** Ummm, ummmm, have your head ready, your eyes, your ears, your mouth, um, your hands, your feet.

**Int:** Uh huh, that’s getting your whole body ready, right? And then you said your head. How do you use your head?

**Janie:** [Unintelligible] And one strategy is... um, um... you make pictures in your mind.

**Int:** Yeah, make pictures in your mind.

**Janie:** Make predictions.

**Int:** Make predictions, right. Do you know what that means, make predictions?

**Janie:** You ask yourself questions. [. . . ] I tried, I tried making pictures in your head... ...and... make predictions and I tried some of the other ones but I forget what they were called.

**Int:** Ahh, do you think that making the pictures in your head and making predictions, did that help you?

**Janie:** (enthusiastically, remembering another strategy) And pretend you’re really there!

**Int:** Oh, and pretend you’re really there. You like that one, huh?

**Janie:** Uh huh!

**Int:** Yeah, did those help you?

**Janie:** Uh huh.

**Int:** How did they, how do you think they helped you?

**Janie:** Um, because, um, because it kind of makes me proud of learning new things of stuff.

Janie was able to name four of the six strategies during the course of her second interview. She was not, however, able to give any specific examples of when she had used the strategies or how they could be useful for remembering. She merely expressed the feeling of pride that she had learned something new.
Of the nine students who were interviewed, only Cathy made reference to the new strategies on her written questionnaire, writing “Use your strategies like make pictures in your mind or any others.” During her interview, Cathy mentioned three of the strategies and said she had tried making pictures in her mind but was indecisive about making predictions.

Int: What are some strategies you know that can help you to be a better listener?
Cathy: Well, I usually always, always do, uh . . . making pictures in my mind and I just learned blocking out distractions.
Int: Okay (laughs). Anything else?
Cathy: Uhhhh . . . sometimes I predict things.
Int: That’s a good one. Yes, okay, anything else?
Cathy: And . . . (long pause) . . . not really.
Int: Okay, have you tried any of these strategies?
Cathy: I never tried predicting but I’ve always tried making pictures in my mind.
Int: Okay, have you tried predicting since we talked about it in the classroom?
Cathy: Yeah . . .
Int: Does it work for you?
Cathy: Huh uh (shaking head no).
Int: Okay, uhh . . . making these pictures in your mind. Does that help you?
Cathy: A lot!
Int: Okay, why do you say so?
Cathy: Because usually there’s no, uh . . . pictures on a chapter book. My sister is looking at it without showing me . . . it, uh . . . I just I like, uh . . . I just pretend . . . I don’t make the pictures still . . . I make them like they’re moving.

Cathy has elaborated on her strategy use in a way that indicates she has adapted it and personalized it. She understands that making pictures in her mind is more effective for her than making predictions and is able to verbalize it.

Interestingly, on her posttest questionnaire Ann had written “do stratgis” (sic) but had crossed it out and written “be good,” an action that seems to support the claim that students chose their answers based on the simplicity of the words they were going
to write. Ann was a high achieving, but reserved, student who may have been
influenced by the need to be correct in her spelling. During her interview, Ann was able
to name two of the active listening strategies.

    Int: What are some strategies that can help you to be a better listener?
    Ann: Block out distractions.
    Int: Okay. Anything else you can think of?
    Ann: [pause]. Um, [another pause]. To form a question if you don’t understand
    something.
    Int: Very good. Yes, very good. Have you tried any of these strategies when,
    when I’m not around, er, or even when I’m there?
    Ann: Yeah.
    Int: And have they worked for you?
    Ann: Yes.
    Int: How so? Tell me about it.
    Ann: Well, [pause] one day when I was in soccer there [inaudible] we were, we
    were gonna practice something. . .
    Int: Okay. . .
    Ann: So I used, um, blocking out distractions.
    Int: Oh, okay. People were distracting. . .
    Ann: Um hum. . .
    Int: You blocked them out, and, and practiced, right?
    Ann: [nods head yes]

    True to the responses written on their questionnaires, Mickey and Hussein did
not mention any of the active listening strategies even when probed during their
interviews.

    Int: Now what are some strategies you know that can help you to be a better
listener?
    Mickey: Ummm, don’t talk to your friends, ummm. . .
    Int: Don’t talk to friends (laughs). Yeah, that would. . . can’t listen when you do
    that, huh?
    Mickey: Listen to your teacher.
    Int: Just listen to your teacher.
    Mickey: Uh huh.
    Int: Any other strategies that you use?
    Mickey: Ummmm, keep your hands and feet and your body quiet.
    Int: Keep your body quiet, that’s good, that’s good.
    Mickey: Mmmmmm.
Int: Anything else?
Mickey: Nah.

Mickey's responses were typically very short and succinct. The interviewer had difficulty drawing him out during both of his interviews. Though it appeared that not much insight was gained from Mickey's responses, the fact is that he represents a type of second grader in his response style and contributes to the assumption that some children of this age experience difficulty in articulating their thoughts.

Hussein wrote “stop, look, and listen” on both his pretest and posttest questionnaires and stuck to that response during his interview. Hussein had referred to distractions and making pictures in his mind earlier in the interview but those did not seem to be useful options for him to use for improved listening. Even when it did not seem to quite make sense, Hussein stuck with his quick and easy response.

Int: What are some strategies you know that can help you be a better listener?
Hussein: Stop, look, and listen. [A brief discussion of this ensued.]
Int: Okay, anything else? Any other strategies to be a good listener?
Hussein: (shakes head no) They’re the only ones.
Int: Have you tried any of these strategies? Do you stop, look, and listen?
Hussein: Well, I don’t, I don’t use the word look but, and, but I only, ah, listen to the story. I don’t look or stop.
Int: Hmmm, you like to just. . .how, what do you do when you’re listening to a story? Tell me about it.
Hussein: I just hear what she’s saying and, um, I don’t, um, look or. . .[. . .] I don’t see the pictures either in the story. [. . .] I don’t, ah, want to look or listen, I mean stop because, ah, there were some people who didn’t have stories but people just tell stories to them.

Hussein seemed to realize that “stop, look, and listen” may be an inadequate response but he did his best to rationalize its use. Even though he had previously expressed an awareness of the new strategies, he remained stalwart in his commitment to “stop, look, and listen.”

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Cara, like Mickey, wrote “be quiet” on her questionnaire and said “not talk when the teacher’s talking” when probed in the interview. When asked if she had ever used one of the listening strategies that was talked about in class, Cara mentioned that her brother had interrupted when she was reading a book at home and she had blocked out the distraction. Ron wrote “don’t play around” on his questionnaire. When interviewed, he rapidly listed four of the new strategies and said they had helped him because he had used them. There was no further elaboration.

Int: Okay, so do you feel like you are a better listener now than you were when we started?
Ron: Yes, I do.
Int: Why?
Ron: Because we learned different types of strategies.
Int: Yeah, can you tell me any of the strategies?
Ron: Um, block out distractions, uh, um, make pictures in your mind, um, pretend that you’re in, um pretend that you’re in the story, form questions out of, um, while you’re listening to the story, ummm. . .
Int: Great! Very good! Did they help you?
Ron: Yes.
Int: How come?
Ron: Because I used most of them.

The qualitative data gained from the interviews is informative in several ways. It warns us that what students wrote as their initial response may be the first and simplest idea that comes into their minds. Although it was surprising and disappointing that only one-third of the students referred to any of the six active listening strategies that were emphasized during the course of the study, the interviews led us to suspect that many more of the students recalled the strategies and may have even used them.
Following probes, several of the students who had written observable behaviors for being good listeners on their posttests did in fact demonstrate that they remembered the active listening strategies and talked about how they had used them.

In-class discussions corroborated the finding that students were using the strategies as they performed the assigned task during each session. At the end of each session, the research assistants asked the students to share ways in which they had used any of the strategies to help them that day. Students gave specific examples of how they had used particular strategies (e.g., “I connected with what I already knew” and went on to talk about porcupines, the forest, the sea: “I tried to guess what was going to happen next”; “I imagined I was a mouse holding on to the hat”). One student said, “I remembered the story then rewound it and played it back to get all the answers.”

We did not keep track of demographics of students who made helpful comments during the class sessions. What is clear is that there were always some students who were able to articulate their use of specific strategies by giving examples of how they had helped themselves to remember the story, thereby modeling the desired behaviors.

Use of Goal-Setting Strategies

Not all of the 356 participants, including the nine interviewed students, shared the same goal-setting experiences. It is informative to examine student behaviors and cognitions, at least to the extent that it is possible to uncover them, from the three conditions separately for emerging patterns. The quantitative analysis indicated that there was no main effect for performance but that students in all conditions raised their
level of self-efficacy for listening to stories. An examination of student oral responses to interview questions regarding goal setting provided a window into the nine second-graders’ thoughts about the value of the goals.

**Self-set goals.** Jody and Hussein were in the student-set goal condition, thus goal setting had been an active experience for them. Hussein’s goals and actual scores for the eight stories were as follows:

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Int: Do you think... we set goals in there, remember how we used to set goals? Do you think setting goals made any difference on how well you did on the questions? Hussein: Ummm, no, not really.


Int: Don’t know? Setting the goals didn’t really make a difference for you? Hussein: No.

Int: Didn’t matter what you set your goal at, you didn’t try any harder or any less?

Hussein: I tried to get them all right, but...

Int: You just tried to get them all right?

Hussein: Yeah.

Int: What did you generally set your goal at?

Hussein: Today or . . .?

Int: Any of the days. Did you usually . . .

Hussein: I usually put, um, ten or nine.

Int: Uh huh, and then you tried to get them all.

Hussein: Yeah. . . or seven.

Int: Okay, um, if we read another story today, where would you set your goal?

Hussein: I would set my goal to, uh, ten.

Int: Ten? Okay. . . How sure are you that you could reach that goal? [. . .]

Hussein: I’m, uh, 50% sure.
Int: 50% sure? How come?
Hussein: I don’t really...
Int: 50% means like half of you says yes, you’re sure and half of you says no, you’re not sure. Is there a reason you’d have half yes, half no?
Hussein: Because sometimes I get, like um, like I get embarrassed because some people, like, laugh at me.
Int: Oh, why do they do that?
Hussein: If I don’t get, like, what I want they laugh at me.

Hussein’s goals showed evidence that he adjusted his self-set goals in the middle of the study as he reflected on his performance. He did not articulate his thoughts about this behavior during the interview, however. As he talked, Hussein seemed to be saying that he would always try to get all ten, or at least nine of the responses correct, whether he set goals or not. He did not appear to be completely confident about his ability to reach that goal on every attempt, particularly in light of other students’ potential reactions if he were to be publicly unsuccessful. His written responses corroborate his answers. When asked on the written posttest questionnaire where he would set his goal if given another story today, Hussein wrote 7 and on a scale of 1-10 on how sure he was that he could reach that goal, he said 5.

Jody’s goals and performance scores for the eight stories were as follows:

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Int: You know when I came into your class, Jody, and I asked you to set your own goals?

Jody: Um hum.

Int: What’d you think about that? Did that help you to be a better listener? Do you think if, if, um, if I hadn’t set any goals, if there’d been no goals for you, do you think you would have tried as hard?

Jody: I would try as hard as I could try.

Int: So if I went back in there this afternoon and read you a story and just said ‘set whatever goal you want’, what number do you think you might set for yourself?

Jody: Um, I think I would set 9, ‘cause I’m usually getting 4 or 9, ‘cause I keep on getting 4, then I get three 9s and three 4s, un [. . . ]

Int: Okay, okay, so you felt comfortable at 9?

Jody: Um hum.

Int: Okay, all right, so you’re pretty sure you could reach that goal of nine?

Jody: Um hum. [Note that Jody did not get three 9s or set a goal of 9.]

Jody’s success rate in answering questions correctly was lower than Hussein’s. There was a wide discrepancy between Jody’s goals and her performance. On her written posttest response, Jody said she would set her goal at 10 for a new story and gave a confidence rating of 9, which is fairly consistent with what she said in her interview. It was not consistent, however, with what she actually did in the goal-setting opportunities in the classroom. Jody, as a low-achieving student according to her teacher, exemplified Horn and Murphy’s (1985) finding that the positive impact of self-set goals on low achievers may lie in the opportunity to exceed the goals. Even though Jody consistently scored higher than the low goals she set for herself, she adjusted them only slightly. In her interview, she stated that she always tried as hard as she could. She also said that she would set a goal of 9 during the interview and wrote a goal of 10 in the questionnaire,

Jody and Hussein do not represent all students in the self-set goals condition. Scores of some students in the self-set goals condition who were not interviewed
strongly indicate that they based their goals on prior performance. A male, rated low academically by his teacher, provided an example of such a student. This boy made adjustments according to his performance, demonstrating his active role in the goal-setting process.

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This boy showed an increase in both general and specific self-efficacy from pretest to posttest. On the general efficacy question, “How good are you at listening when your teacher is reading a story to you?” he went from 5 to 9. On the specific efficacy question, “How many questions do you think you could answer correctly on this story?”, he increased from 7 to 10. He also wrote 10 for his goal on the posttest questionnaire. It appeared that some students who had practice with setting their own goals were able to realistically evaluate their goals based on their prior experience.

Comments from classroom discussions about goal setting corroborated such a claim. When asked to tell how they decided on a goal for a particular story, students frequently gave explanations such as, “Well, last time I had a goal of 10 but I only got eight. This time I’m setting my goal at nine.” Many students made realistic adjustments as they evaluated their previous performance and were able to articulate their thought process.
Not all students used the information in the same way. One example is a male, rated academically medium by his teacher. His goals and performance scores were as follows:

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This student showed no evidence of using his previous scores to revise his goals. He set a goal of 10 every time, even though he never succeeded in reaching it. Despite his failure to reach his goal on every occasion, both his general and specific efficacy for listening appeared to increase. On the general efficacy question about being a good listener when his teacher read a story, he increased from 4 on the pretest to 10 on the posttest. On the specific efficacy question about how many questions he would be able to answer correctly on a new story, he increased from 9 to 10. He also wrote a goal of 10 on his posttest questionnaire and gave a confidence rating of 10. The student’s optimism was not eroded by his repeated failure to reach the goal he had set for himself. The optimism often found in young students remained for the duration of the study, demonstrating a strong level of resilience.

*Teacher-set goals.* Three students from the assigned goal condition, Ron, Ann, and Cara, were interviewed. Their responses indicated that having goals encouraged
them to work harder but that they may have set other goals for themselves than those they were asked to record by the teacher. Ron's scores support such an assertion.

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Int: Um, do you think my setting the goals for you, um, helped you to answer the questions better?
Ron: Yes.
Int: Why?
Ron: Because that gives me something to work hard for.
Int: Okay, did you, did you set, even though I set the goals for you in the room, did you ever set one for yourself above what I did, gave you?
Ron: (nods head yes)
Int: How come?
Ron: I didn't write it down though, because, um, it, I wanted to do it because I like getting high scores.
Int: Okay, good! If you were going to set your goal today, where would you set it?
Ron: Ten.
Int: At ten. And you're pretty sure you'd reach that goal?
Ron: (nods head) Yeah.
Int: How come?
Ron: Because I usually got a 10.

Ron's written responses were in line with what he told the interviewer. He wrote that he would set his goal at 10 for a new story and gave a 10 for his confidence rating. Ann and Cara also wrote 10 for goal and confidence ratings on their posttest questionnaires but did not articulate their motives as clearly as Ron did in their interviews. Ann's scores and comments were as follows:
Int: Do you think because I came in your classroom and I set goals for you [...] did that help you to try to be a better listener?
Ann: Yes.
Int: Okay, because, like, why do you think so?
Ann: Well. . . (long pause)
Int: Did you maybe try a little harder?
Ann: Yes.
Int: Do you think, let me ask you, if you, if I had not set a goal for you, if there were no goals, do you think you would have tried as hard?
Ann: Um hum.
Int: You would have tried as hard? Kay, because you want to succeed, right?
Ann: Um hum.
Int: You want to do better (Ann nods head). Okay, okay, so, but you do think that setting the goals help you to get there?
Ann: Yeah.
Int: Okay, Okay, um, if we read another story, if, if I would come in right now and read you another story, and I asked you to set a goal, what, what goal do you think you’d set?
Ann: Ten.
Int: A 10, okay. Good, good. You think you could reach it? How sure are you about reaching that?
Ann: (with a big smile on her face) One hundred percent sure.

Ann was particularly quiet and needed prompts to elicit responses, an action that may have unduly influenced her thoughts on the more abstract piece of the interview.

Ann was confident, however, in her choice of a new goal.
Cara’s goals and scores were as follows:

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Int: You know, in your class, I, uh, set goals for you, didn’t I? Um, and, do you think that made a difference for you?
Cara: Yeah.
Int: You think so? Did it make you try harder? What, how did that help you?
Cara: It made me try harder.
Int: Do you think if I didn’t set any goals for you, you would have tried as hard?
Cara: No
Int: No, why not? (Cara does not answer, looks away. It becomes obvious that she does not know what to say.) You don’t think you would have tried as hard if, if, um, the goals had not been set?
Cara: Huh uh.
Int: Okay, all right, um, do you set goals for yourself ever?
Cara: Yeah.
Int: Would you have set higher goals for yourself, or just...?
Cara: Yeah, I would.
Int: You would have. Okay, if I read a story to you today, where would you set your goal?
Cara: (slowly) Ni-eeen. [. . .]
Int: Are you pretty sure you could reach that goal?
Cara: Yeah.

Cara’s responses seemed, too, to be based as much on the tone of the questions as to her own ideas. The goal-setting process, short of assigning a numerical quantity, appeared to be an abstract activity for the students, especially when it was assigned by the teacher. Cara exceeded the assigned goal on all but one story but did not state that she would try to get them all right, even though she was successful in answering the questions correctly.
No goals. Students who were in the control group, and did not have experience with setting and achieving specific goals during the course of the study, set high goals for themselves when asked to for the first time on the posttest questionnaire. All four of the students in the no-goals condition wrote that they would set a goal of 10 for themselves if they were to hear another story that day and three of the four gave a confidence rating of 10 for reaching that goal. Cathy qualified her goal of 10 by writing in "at least I'll try" and she did not give a confidence rating. Because Cathy, Janie, Mickey, and Gavin were not familiar with the goal-setting activity, their responses were widely diverse. Their performance scores on the eight stories are as follows:

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Int: Did you ever set any goals for yourself before you heard a story?
Cathy: No, I never did.
Int: You never did that before? If we read another story today, where would you set the goal?
Cathy: Probably, I would probably try to do it to 10 except I might not be able to. I would just try my best to get to 10.
Int: Well, how sure are you that you could reach that goal?
Cathy: Probably I would get nine or eight or something.

While Cathy's response indicated that she associated a numerical value with the goal-setting process, Janie's did not.
Int: Did you ever set any goals for yourself before you heard a story?
Janie: Yes.
Int: Ever say, I want to listen this well or I have a goal, I want to learn a lot or something like that, did you ever do that?
Janie: Yes.
Int: Uh huh, tell me what you did. What did you do?
Janie: Um, I, um, I kinda felt good. [. . . ]
Int: Was it a story you were listening to? [Janie talks about a book that she had talked about in her first interview.] Did you ever set a goal about that book?
Janie: Yeah.
Int: Did you, what was your goal?
Janie: My goal was, um, that, um, we went to the store to get that, that book and I loved it so, so much my mom just, um, we got it from the store and they let you keep it. [. . . ]
Int: If we were to read another story today, how well. . . would you set a goal like [. . . ] how good of a listener do you think you'd be?
Janie: Um, a very good listener.

It is possible that the way the interviewer asked the question influenced the two girls’ responses or it may have been caused by the lack of familiarity with the goal-setting task. Mickey, however, said that he would try to get all of the answers right.

Int: If we read another story today, what would you set your goal for how many questions you could get right? (pause, no response) What would you try to get? (pause, no response) What do you think?
Mickey: All of them.
Int. All of them? All right! Um, how sure do you feel about that?
Mickey: Mmm. . .
Int: Are you pretty sure you could get all of them, or not so sure, or in between, or real sure?
Mickey: Pretty sure.
Int: Pretty sure?
Mickey: Yeah, I’ve done it before.

Mickey did not discuss having set goals during the study. Although he said he had set goals for himself in response to the interviewer’s question, he did not give any concrete evidence of having done so. When asked by the interviewer where he would set his goal for a future story, he did not actually assign a numerical value to his goal.
but stated “All of them” consistent with his written response. Mickey, like Ann, needed a lot of prompting in order to elicit responses. His responses tended to be one-word utterances that related to the interviewer’s attempts at drawing him out.

In contrast to Mickey and the two girls, Gavin seemed to be aware of his thought process and expressed it enthusiastically.

Int: Did you ever set any goals for yourself before you heard a story?
Gavin: Yeah!!! That’s a 10.
Int: Okay.
Gavin: All of them (laughs)
Int: Okay, you set a goal of 10 all the time?
Gavin: Yeah,
Int: Okay...
Gavin: But they never. . .I never. . .only. . .but only. . .I never got like five and under five questions wrong.
Int: Okay, so explain this to me.
Gavin: I mean like five questions under right.
Int: Okay, all right, so there was a time when you got only five right?
Gavin: No. . .it’s like there was a time. . .seven and there was a time. . .nine and like three times it was a 10.
Int: When you got seven right, did you set some kind of goal after that?
Gavin: Yeah (long sigh) I tried to make, practice, that’s when I practiced a lot.
Int: Then you got 10s after that?
Gavin: No, not exactly but I got eights and nines.
Int: Eights and nines. . .okay. . .that’s very good.
Gavin: And tens.
Int: Okay, good, uh. . .
Gavin: The first story I got 10.
Int: Yeah, that first story was easy, wasn’t it?
Gavin: Yeah.
Int: If we read another story today, where would you set your goal?
Gavin: Ten (giggling).
Int: Okay, how sure are you that you could reach that goal?
Gavin: (long pause) I think I’m sure enough to be like nine questions would be right.
Int: Okay...
G: At least.
Int: Okay, okay, so you’re real sure. Why do you think you can reach that goal?
G: Because (long sigh) I just want to, want to reach it. . .reach it really bad.
Gavin's interview gave strong evidence that he had set goals for himself during the study, even though goals were never mentioned as part of the task in which he participated. Gavin's responses also indicated that he had a high level of motivation for the listening task and that he was able to regulate his own behavior when he was not satisfied with his previous performance. The voluntary goal-setting behavior, as exemplified by Gavin's responses, presumably happened with other students in the no-goals condition, as well, offsetting any advantages that may have been found in the goal-setting conditions. Without interviews with the other students in the control group, it was impossible to know how widespread the occurrence of this independent goal-setting behavior actually was. The fact that one of the four interviewed students in the no-goal group mentioned using goals with a high degree of credibility leads to the expectation that there were others who did as well. Students in the teacher-set goals group also alluded to having consciously set their own higher goals than those that had been assigned to them. While such behaviors are both informative and admirable, they do confound the results of the current study.

Summary. Student behaviors during the goal-setting tasks and their discussions of goal-setting behaviors made it difficult to make generalizations about student cognition at the beginning of second grade. The wide range of discrepancy between the students' levels of maturation, combined with the wide-range of discrepancy in their ability to articulate their thoughts and behavior, hinder the process of analysis. Individual differences are clearly an obstacle to making any general statements about the effects of a goal-setting strategy, whether self-set or assigned, on second-graders'
performance on the listening task as described in the current study. What is certain, however, is that there were students who were reflective and used the information they gathered from comparing their actual scores to their goals to set reasonable goals for themselves on a future similar task. Some of the students who engaged in such an activity indicated that they tried harder or practiced more as a result of their goals. Others indicated that they would have done their best whether they had any goals or not.

*Insights into Self-Efficacy from Questionnaires*

An initial analysis was conducted on the written posttest questionnaires that were completed by 337 of the participating students. To organize the data, individual matrices were again formed for each school and divided into gender, condition, and academic performance categories of high, medium, and low. Matrices are attached as Appendix T. "Yes" and "no" responses to the question "Do you think you are a better listener now than you were when we started the stories?" were recorded. This response was taken as an indication of students' general efficacy for a listening task by the end of the study. The largest percentage gap between groups was found in the between schools category, with a range of 20% of the students in School #3 giving a "no" response to School #5 where only 5% of the students responded "no." Schools #2 and #6 had 17% "no" responses and Schools #1 and #4 had 12% "no" responses. It is difficult to determine why this disparity existed. Schools #2 and #6 were both taught by the same research assistant, but the other schools did not reflect a relationship to a research assistant as was the case when naming strategies discussed previously. The socioeconomic status of the schools also did not seem to be a factor in the discrepancy.
I then investigated the differences between gender, academic performance and condition. The gender percentages were equivalent, with 13% of “no” responses for males and 14% for females.

*Teacher-rated performance.* There was a slightly larger discrepancy between groups when categorized by teacher-rated academic performance than there was by gender. While students who had been rated high and medium were fairly equal in their percentage of “no” responses (13.3% and 12.6% respectively), only 7 of the 68 responding students (10%) rated as low academic achievers by their teachers said they were not better listeners at the end of the study. Two of their responses were undecipherable due to poor handwriting or spelling. Two offered no explanation for responding negatively. One response was irrelevant. The other two responses that were given seemed to indicate lower overall self-efficacy for school performance among these students. One low-ranked male responded “No, because I am not quicker.” Another said, “No, because I don’t know how to read.” The seven low students, five males and two females, who responded negatively appeared to represent a very at-risk group in both efficacy and performance. Yet six of the seven said they would set a goal of 10 if hearing a new story that day. The seventh set a goal of eight. Whether the low students exhibited resilience due to low self-expectancies or a naivete for performance is unknown but their written responses to the question “Why?” lean toward the latter.

The low students who believed they were better listeners at the end of the study, however, gave typical responses of “Yes, because I am learning.” “I listen better,” or
"I can do it better." One male said, "Yes, because I just think I do good." Low students were also as likely to refer to the newly learned strategies as students from the high and medium groups did.

The 13 of 98 high academic performers who responded negatively gave very different explanations than their lower-ranked classmates. Two high students said "No, because I get questions wrong," and "No, because the stories got harder." These students seemed to expect to do well and were reacting to what they deemed to be a failure. Most of the high students, however, explained their "no" responses by writing that they were already good listeners at the beginning of the study and they stayed the same. One responded, "No, I was a great listener before and now I’m just as good." One high girl referred to the new strategies by saying, "No, because it’s hard to block out distractions." It must be noted that in such cases with high students, in particular, a "no" response did not mean they had low efficacy for listening at the end of the study. Rather, they had begun with a high sense of efficacy and maintained it throughout the duration of the lessons.

Of the 21 of 166 medium-ranked students who said "no," responses were quite diverse. One boy said, "No, because I’m still trying to listen well but I can’t." Another said, "No, because I was sleepy" and another, "No, because I was already good." A medium-ranked girl said, "It was easy." Others gave no reason for their negative responses or wrote "I don’t know" when asked why.
Across conditions. Finally, examining student “no” responses across conditions shows a difference between the goal-setting conditions. Student-set goal groups had 11.6% “no” responses, teacher-set goal groups had 15.6% “no” responses, and the no goals groups had only 8.6% “no” responses. These results reflect the different experiences encountered by the children in the three conditions. It is possible that greater frustration was met by the children who had no control over their goals but instead were assigned a goal prior to each story/question session. Nearly twice as many students in the teacher-set goals group said they were not better listeners at the end of the study than students in the control group. Students who were able to set their own goals may have felt more control and thus experienced less frustration as they were able to adjust their goals to be in line with their previous performances. The control group did not have explicit goals with which to measure their performance and therefore may not have suffered from the experience of failure to the extent that students in the goal-setting groups may have encountered. In fact, some of the best responses to why they thought they were better listeners at the end of the study came from students in the control group. For example, a high male wrote, “I learned a lot. She taught me a lot of new listening skills and I learned a lot of more strategies.” A medium female wrote, “I connected to what I already knew and it helped.” A high female said, “You showed me the strategies” and a low female said, “You taught me a lot of stuff.” A medium male simply stated, “I tried my best.” Only one student in the entire study referred to goals as having any influence over their performance. A high female in the student-set goals condition said that she became a better listener “by setting a lower goal.”
Disparity of responses. Across all academic achievement levels, the majority of students did state that they believed they were better listeners at the end of the study. While their responses indicated a wide disparity of metacognitive awareness, they nevertheless give insight into the thinking that second graders use to make such judgments. Many students across gender, academic level, and condition attributed their increased listening performance to the new strategies they had learned, sometimes writing one or more specific strategies and other times just mentioning strategies in general. A few synthesized the idea of the strategies, saying they were better because they were “thinking in my head,” and “understanding the story.” One high male said “I get into the story.” Other students in an equally distributed fashion attributed their increased performance to practice or to simply being older at the end of the study. A low male wrote that “the more you do it the more you get it.” A medium male said he was better at the end because “when we first started I was not listening.” One high female believed she was better because “I am older and smarter now” (than at the beginning of the study) and another said “I think I’m smarter now than I was.” A high male said, “You get older every day” and a medium female believed she had improved “because my ears got bigger.”

A handful of students attributed their improvement to the prowess of the teachers, saying they were better “because you were a good teacher.” Some attributions were irrelevant, such as “I learned that we couldn’t get a drink” and “I learned to raise my hand.” A few students claimed that they had improved because they had “just guessed.” One medium female simply stated, “I memorized listening.”
Some students were quite insightful, such as a high female who stated that she "used to forget very quickly, now I think harder." A second high female said she was better "because I used more skills now and less then" (at the beginning of the stories). Another believed she had improved because "before I didn’t know how to use my head." She went on to write that "I make pictures in my mind to understand the story better. When I imagine I’m really there it helps tell me what’s happening better."

What is noteworthy from students’ written responses is that the majority of students were sincere and serious about sharing their thoughts as best they could. They were reflective to the extent that the time allotment and writing requirements allowed. Even though the strategies had been stressed in the lessons over the course of the study, only about one-third of the students attributed their improvement to the use of those strategies. None attributed their improvement to the goal-setting strategy except for the one student who said she improved by lowering her goals, a dubious endorsement for goal setting. Given their range of comments from profound to absurd, questions arise as to how the students would respond if probed more deeply for explanations. The nine interviewed students’ comments add to our deeper understanding.

Insights into Self-Efficacy from Interviews

Many of the student comments that were quoted in the previous section relating to goal setting reflect on student efficacy for the task. Goals of 10 were considered to indicate a high level of specific efficacy for answering questions related to stories that would be read aloud. Of the nine interviewed students, regardless of their experience with goal setting, seven said they would set a goal of 10 for a new story to be read that
day. Cara hesitantly set her goal at nine and Janie never named a number. I next explored students’ oral responses to the question “Do you feel like you are a better listener now than you were when we started?” and “Why?” to determine if there were any patterns that emerged between conditions for student attributions to their improvement.

Hussein and Jody were in the student-set goals condition. In Hussein’s initial interview he was self-deprecating in regards to his listening habits. He made comments such as “sometimes I don’t listen. . .sometimes I look around and I don’t pay attention.” On further questioning he had said, “I’m not interested in the title and I play with, ah, staples if they’re in the ground. I pull them up and play with them.” Hussein’s distractibility was in evidence at that point in the interview as he responded to an ice cream truck that he heard outside.

Hussein: How can you hear when there’s no streets?
Int: Oh, that’s the. . .
Hussein: Once when I was going I saw the, ah, ice cream truck following us.
Int: Did you?
Hussein: When I was going home.
Int: Now, when you listen, let’s get back to listening. . .

During the second interview, Hussein responded that “Yes,” he was a better listener now. In response to the question “Why?” he replied, “Because I used to tap people. . . and I used to be a distraction. . . because I wasn’t used to it. But now I’ve been used to it so I don’t tap people or anything.” On his questionnaire, Hussein also had written that he was a better listener now because he “used to tap people.” While Hussein mainly discussed his strategy of “Stop, look, and listen” during his interview, he did refer to
several of the listening strategies that were presented during the lessons, though he largely disregarded them. At the end of his interview, he mentioned them again, still not in a convincing manner.

Int: What was the most helpful to you of all the stuff that I did?
Hussein: Well, I didn’t know all of those strategies until you came.
Int: Good, so you learned some of those, huh?
Hussein: Yeah.
Int: Do you think you’ll use any of those?
Hussein: Yeah.

Jody’s response to the first question was promising. “That story that you first, um, read to us, I got them all right because I used the listening strategies and I felt pretty good.” When she was asked to talk about the strategies she had used, however, Jody repeatedly lapsed into the discussions about not cheating. At the end of her interview, Jody again seemed to have picked up on the strategies but through continued discussion failed to show that she had really adopted them for her own use.

Int: Okay, do you think that using, uh, the strategies help people a lot?
Jody: Um hum.
Int: They help them do better?
Jody: Um hum, yeah.
Int: Okay. What’d you like best about the listening lessons?
Jody: I liked, um, you read us the story. I liked to answer the questions.
Int: You liked answering the questions?
Jody: (Nods head yes.)
Int: Great! What was the most helpful thing to you?
Jody: That. . . you told us how to listen.
Int: Did anything, did anything I say really stick in your mind?
Jody: Um, yeah.
Int: What . . .what. . .give me one example.
Jody: When, when, uh, when you like made us those goals, the um. . .the listening strategies.
Int: Great.
Jody: I... in Miss Smith's class she usually gets our attention by, by, I told you this, when we did our interview last time, I need your eyes, and we say "ears and heart" and I just felt so good.

On her written questionnaire, Jody had also said that she was a better listener now. Although her reason was nearly indecipherable, it undoubtedly referred to the same "eyes, ears, and heart" saying that she used in her classroom. Neither Jody nor Hussein appeared to have benefited outwardly from the instruction on listening strategies though they both expressed high levels of efficacy for the listening task. Yet their comments revealed a positive affective response to the listening activities that had been presented to their classes. Neither of the two students in the student-set goals group articulated benefits that they had derived from the specific strategies that had been taught in the study. Rather, they both clung to quick, easy epithets that they had heard repeated over and over in school that seemed to elicit a positive response from them.

Ron, Cara, and Ann were in the student-set goals condition and each of the three students seemed to have been more influenced by the strategy instruction than either Hussein or Jody. In his first interview, Ron had answered that he was a good listener "sometimes." When asked why, he had only responded, "Um, I don't know." He had also said that "I...I'm kinda like in the middle" of the kids in the class for listening. He had been unable to think of any things that he could do to help himself listen and understand a story better at that point. During his second interview, Ron's response to the question "Do you feel like you're a better listener now than when we started?" was very direct. He said, "Yes, because we learned different types of strategies." He went on
to name the strategies and talked about using them. On his questionnaire he had written that he was a better listener “because we learned some strategies.” He also said that the strategies had been the most helpful part of the lessons. Ron consistently said he would set a goal of 10 for a future story and had expressed high confidence that he could reach it. He clearly showed a high level of efficacy for the task.

Cara seemed confident in her listening skills during the first interview, saying that she was a good listener because she listened to her parents. She also thought she was a better listener than the other kids in the class because “everyone has missed recess except me.” Her only suggestion at that time for being a better listener was to “sit away from my friends so they won’t talk to me.” In her second interview, Cara continued to be efficacious about her listening skills, saying that she was “a better listener now than last time... ‘cause I can answer more of the questions.” She stated that “If I was listening, I could probably get lots of answers and questions right.” The most helpful thing about the lessons, she stated, was that the research assistant “helped me learn stuff.” However, the only strategy that Cara was able to discuss at the end of the study was her use of blocking out distractions and on her questionnaire she had attributed her improvement to the growth of her ears. Cara wrote a goal of 10 but only gave a goal of nine when questioned orally. It is questionable whether Cara’s efficacy really improved during the study.

Ann, too, began the study saying that she was a good listener “because I always listen and I have, I tell people when they’re always being noisy.” She talked about having had a little difficulty with listening at one point. “Well, we had a little test on
paper and it said all different questions and then I, I kinda forgot some parts in the book.” She felt that the other kids were “a little bit about the same” at listening as she was “because sometimes they could be noisy.” On her posttest questionnaire, Ann wrote that she was now a better listener “because now I know more.” She agreed in her interview, but explained that it was “because I feel more comfortable.” Ann had given a goal of 10.

Int: You think you could reach it? How sure are you about reaching that?
Ann: One hundred percent sure (with a big smile on her face).
Int: Hundred percent sure! (slight laugh) Okay, why do you think so? Why do you think you’re a hundred percent sure?
Ann: Well, because I, I know all the strategies.
Int: Okay, good, you think you’re a pretty good listener, right?
Ann: Yeah!

Even though Ann attributes her confidence to the strategies, she was unable to articulate an adequate response as to why.

Int: Okay, you just said you’d use the strategies. Well, why do you think that using a strategy helps people to do better?
Ann: Well, because if sometimes there are people that talk a lot, they will help them stop talking.

The three students in the teacher-set goals condition had mixed results when considering their improved performance and efficacy. All three had different response styles and levels of articulation. Yet, what they had in common were expressed beliefs about being better at listening listeners at the end of the study.

In the final section, I will examine the interviews from the four students in the control group, again comparing their responses from the first interview to the second for signs of improved efficacy. Janie’s first interview was indicative of the difficulty Janie had in staying on task and addressing questions directly.
Int: Do you consider yourself a good listener?
Janie: Uh huh.
Int: Uh huh? How come, why do you think so?
Janie: Ummm, because usually I have, um, I always, um, think of something that
she’s reading and then I can memorize it from somewhere. [. . .]
Int: Do you ever have any trouble like listening when your teacher’s reading to
you?
Janie: Sometimes.
Int: Sometimes, uh huh. Do you ever have trouble understanding when your
teacher is reading to you?
Janie: Little bit.
Int: A little bit? [. . .] What does your teacher do that helps you listen or
understand better?
Janie: Uh, she says, um, she tells me some of it, and one time I was doing a
Statue of Liberty, I was the only one that said, I was the only one to remember that
there’s a museum in the Statue of Liberty. [. . .]
Int: What, how about the other kids in the class. Do you think they listen better
than you, about the same, or worse? What do you think?
Janie: Ummm, kind of the same.
Int: About the same? How come you think that?
Janie: Umm, because sometimes one of my friends, she, um, they forget about
some of them and usually I don’t.

Janie’s initial response on the second interview was positive but further probing
throughout the interview uncovered gaps in her understanding of the usefulness of the
strategies. Her difficulty with articulation caused the interviewer to give prompts that
may have unduly influenced her responses.

Int: Uh, do you think, do you feel like you’re a better listener now than you were
when we started?
Janie: I think I was a better. . . I’m a better listener now.
Int: You think so? How come?
Janie: Ummmm, since you taught us to be more active listeners. (Janie went on
to first discuss getting her body ready to listen, but then began to list several of the new
active listening strategies.)
Int: Yeah, did those help you?
Janie: Uh huh.
Int: How do you think they helped you?
Janie: Um, because, um, because it kind of makes me proud of learning new
things of stuff. [. . .]
Int: So, like when you make pictures in your head or you imagine you’re there?
Janie: Yeah.
Int: Does that, those help you listen better and learn more things?
Janie: Yeah. [. . . ]
Int: . . . why do you think if you use those things it makes you a better listener?
Janie: Ummmm.
Int: Why do you think that helps people listen better?
Janie: Because it ma. . . . because it. . .you can, um, um, I forget what it’s called.
Int: That’s okay.
Janie: Helps you learn better and better at listening [. . . ]
Int: Okay, what did you like best about our listening lessons?
Janie: Umm, I liked, um, um, make pictures in your head and pretend you’re really there.
Int: You liked those?
Janie: Yeah.
Int: What was the most helpful to you?
Janie: Ummm. . .
Int: Of all the stuff that I did and taught you guys, what was the most helpful to you?
Janie: Ummm, of listening?
Int: Just listening.
Janie: Yeah.
Int: Learning how to listen better?
Janie: Uh huh.

Janie’s responses were sometimes right on target and at other times seemed to indicate that she might not have understood the question. Yet Janie continued to feel efficacious throughout the study. Even though she did not give a number for a goal in the interview, she wrote a goal of 10 on her questionnaire and gave a confidence rating of 10 for reaching that goal.

In Mickey’s first interview he said that he was a good listener because he never got his name on the board but that he sometimes had trouble listening “when someone’s doing something.” He said “sometimes” when asked if he ever had trouble understanding what the teacher was saying. When asked if the other kids in the class listened better than he did, he replied, “ Probably some.”

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Int: Why do you think they listen, a few of them might listen better?
Mickey: Well... sometimes...
Int: How can you tell... what makes you think that?
Mickey: Sometimes I make noises with my pencil on my desk.
Int: Does that mean you’re not listening very well?
Mickey: Uh huh. No, and some other people in my class probably listen to her.

On Mickey’s questionnaire he wrote that he was a better listener at the end of the study “because I know all the tips.” Yet, during his second interview he never mentioned any of the active listening strategies. When asked why he thought he was a better listener, he commented, “Ummm, ummm, because, umm, probably had experience.” When probed, all of the strategies that he listed were observable strategies such as “Don’t talk to your friends, listen to your teacher, keep your hands and feet and body quiet.” Yet Mickey said he was “pretty sure” that he could get all of the questions right if he heard another story that day because “I’ve done it before.” Mickey had gotten 10s on his last three stories so his efficacy for the task seemed to be high, based on his previous performance.

Probably no two interviews illustrate the wide differences between student’s verbal skills more than Mickey’s and Cathy’s. In contrast to Mickey’s painstaking interviews that require a high number of probes to elicit even the most simple of responses, Cathy’s exuberance is apparent as she offers full explanations for her answers to questions. When asked if she was a good listener during her first interview, Cathy nodded her head yes.

Int: Why do you think so?
Cathy: Because...I like stories and...sometimes if the story is long I can’t keep the things in my head, except sometimes I really try to think about it but...
Int: Um hum.
Cathy: Ummm... because I’m always curious what the next thing is going to be about.

Int: Oh, uh huh.

Cathy: And so I like to read the book.

Int: Okay. That helps you to be a good listener when you’re curious about what is going on, doesn’t it?

However, when asked if she could think of some things she could do to help herself listen and understand better, Cathy thought for a long time and finally responded “I’m not sure.” On her posttest questionnaire, Cathy wrote that she was not a better listener at the end of the lessons, saying, “No, not really, because I was already a very good listener, at least I think so.” She set a goal of 10 and said, “At least I’ll try.”

In her second interview, Cathy responded “Sort of” when asked if she was a better reader now and repeated what she had written. When asked about strategies, Cathy mentioned several of the listening strategies that had been taught in her class and talked about how she had used them. She said that using them had helped her “A lot!”

Although she had not set goals before, she said she would probably try for 10.

Int: If we read another story today, where would you set your goal?

Cathy: Probably, I would probably try to do it to 10 except I might not be able to. I would just try my best to get to ten.

Int: Okay, why, why would you say that?

Cathy: Because sometimes . . . ummmm . . . well sometimes when you like, uh, after the story I may forget a little bit of the parts but then when you’re saying the story then I’ll remember that part but then I just forget it again but some of them I remember. It’s not like I forget the whole story and what it’s about and say ‘Hmmm, what was the story about? Hmmm, what was it called? I have no idea.’ But I only forget a little bit of the parts. [. . .]

Int: Why do you think that using a strategy helps people do better?

Cathy: Probably because, uhhh . . .like if you don’t block out distractions then you’ll start, you’ll start saying ‘Stop! Stop!’ and then you won’t even, you won’t even hear what the person who’s reading to you is saying and also, uh . . . making pictures in your mind, like, uhhhh . . . sometimes . . . like if you make pictures in your mind it helps because then you’ll know like if you don’t make pictures in your
mind like, if you never have... then you won't even know what the character looks
like...

Int: Okay...
Cathy: ... and in Puffblow's Hat you wouldn't even know what the hat looked
like but...uh...that helps...

Int: That really helps. Yes, it does. Okay. Good job! What did you like best
about the listening lessons?
Cathy: Because the stories are good and because there's no things I don't get...
and uh...because...uh...I like stories a lot and...uh, I especially like made up stories
because then you get to use your imagination.

Cathy clearly showed evidence that she had made use of the strategies as she
listened to the stories, even though she said she was not a better listener at the end.

While she was able to identify shortcomings she had experienced in the past with
listening tasks, she nevertheless expressed a high level of self-efficacy throughout the
course of the study.

In his original interview, Gavin was rather ambivalent about his listening skills.

Int: Are you a good listener?
Gavin: Yeah.
Int: Why do you say so?
Gavin: Because like most of the stories I hear...the questions are...most of the
questions are right. At least some of them are wrong. [...] Int: ...Do you ever have trouble listening when your teacher is reading a story?
Gavin: (pause) Yeah. Sometimes I do.
Int: Sometimes?
Gavin: Yeah.
Int: Is there a reason for that? When you have trouble listening?
Gavin: Yeah.
Int: What is it?
Gavin: Uh, when I keep on remembering something again and again.
Int: Oh... 
Gavin: I try to forget it but it keeps on getting in my mind.
Int: Okay... 
Gavin: There's two things in my mind. The picture as well as the thing. So the
thing comes into the picture of the story so...it like messes up the whole story.
Int: So it's like a distraction? In your mind, huh?
Gavin: Yeah. [...]
Int: Can you think of some things that you can do...to help yourself listen...and understand...better...when you’re listening to a story?
Gavin: Uhh...I don’t know yet.
Int: Not yet?
Gavin: (shakes head and shrugs)

Gavin’s response may have indicated that he anticipated learning something that would be helpful in the future. His responses during the second interview show that he learned all of the strategies and believed they were important. He indicated that he had improved in his listening skills on both his written questionnaire, saying, “Yes, because I have more practice,” and in his interview.

Int: Do you feel like you are a better listener now than you were when we started?
Gavin: Yeah! (enthusiastically)
Int: Do you? Oh, I like that smile on your face. You really think so, huh? (Gavin nods his head in agreement.) Can you tell me why you say so?
Gavin: Because I have more practice...listening. [Gavin then went on to list all six of the strategies.] [ . . .]
Int: Okay, uh, so do you think these strategies help you?
Gavin: Yeah.
Int: Why do you say so?
Gavin: Because it helps me remember things.
Int: (chuckling) Good answer!
Gavin: So, like, so it’s, so if it’s...like...so...if they ask questions at the end it will help me remember.
Int: Okay.
Gavin: And if they have important facts they’ll help me remember even if I’m in college. (Big laugh.)
Int: Yes sir! (laughs along with Gavin). That’s right. You practice these strategies right now and it’s just going to make it easier and easier for you. Right?
Gavin: (nods)

Gavin seemed to believe that the strategies had been helpful to him and expressed enthusiasm at having such important tools at his disposal.
Summary

The nine interviewed students used widely disparate levels of articulation and response style to the probes that considered their efficacy for the listening task. Yet what their responses seemed to have in common was a nearly dauntless belief that they were good listeners and that they would be successful on future listening tasks. Knowing that students' beliefs in their ability to perform successfully exerts a positive influence over their future performance, at least until they have derived enough conflicting information to make a judgment to the contrary, makes their responses seem very positive. In spite of the lack of consistent improvement in their performance during the study, they seem to retain the high levels of expectation that educators should strive to maintain for as long as possible.
CHAPTER 5
FINDINGS, IMPLICATIONS, AND RECOMMENDATIONS

“We are by nature observers and thereby learners. That is our permanent state.”
Ralph Waldo Emerson

In this chapter, I address findings as they relate to the two main research questions. I discuss the effects of a goal-setting strategy on second-grade students’ performance on a listening task from both the quantitative and qualitative perspective. Preceding this discussion, however, I address relevant findings regarding second-grade students’ adoption of listening strategies to further our understanding of how students in the early school years begin to develop the capacity to self-regulate the behaviors that influence their ultimate achievement levels. I then discuss the second research question that examined the effects of a goal-setting strategy on students’ self-efficacy for a listening task. This question is also addressed using both quantitative and qualitative data. Self-efficacy was examined at two levels: a specific level that investigated how well the students expected to perform on a future task similar to the ones they had recently experienced, and a general level that investigated students’ overall self-judgments about their ability to be good listeners. Within the qualitative analysis, I address some refinements of the two main research questions by looking at the degree to which student characteristics of gender, academic achievement, and school...
influenced either their performance or self-efficacy. These issues are embedded in the discussions of the first two research questions, as well as in the discussion of the adoption of listening strategies. In addition, because the task was repeated eight times over a four-week period, a discussion of how student-set goals changed over time is included. Implications of these findings for primary-grade teachers and teacher educators are then presented, followed by a list of recommendations for further research.

Goal setting was selected for this study based on findings from earlier studies that showed even young children derive benefits from using a goal-setting strategy. A unique feature of the current study was that the main purpose, investigating the effects of a goal-setting strategy, was not the focus of classroom instruction. Only students in two of the three groups used goal-setting activities. Except for questions on posttest questionnaires, students in the control group had no exposure to goals or goal setting. The explicit focus for both the classroom teachers and the students was on developing strategies for improving listening by actively constructing meaning during the listening process. The classroom teachers indicated that they valued the emphasis on teaching active listening skills, especially at the beginning of the year when they were establishing their new groups and getting the students acclimated to their new environments.

Findings

No quantitative data were collected pertaining to student adoption of listening strategies as it was not directly related to the research questions. Yet qualitative data
that were collected from all participants, via open-ended questionnaires, gave valuable insight into how students responded to the listening strategy instruction that was presented to their classes during each session of the study.

**Adoption of Listening Strategies**

Through the use of posters and discussions, all participants in the study received instruction on the following listening strategies:

- Block out distractions
- Make predictions
- Form questions as you listen
- Make pictures in your mind
- Imagine that you’re really there
- Connect to what you already know

All students involved in the study had consistent opportunities to review, practice, and discuss the listening strategies during the eight story sessions. Yet overall, only 35% of the students referred to the new strategies on their posttest questionnaires, indicating a relatively low level of integration of the strategies over the intervention period. Higher rated achievers (44%) were more likely than low achievers (26%) to mention the strategies, with the percentage of medium-ranked students (33%) falling in between. These results could be construed in several ways. Perhaps higher-rated students consistently benefit from instruction at a superior rate than their peers, or higher-rated students have a better capability of understanding the utilitarian value of strategy use and are therefore more prone to adoption of such strategies for their own use. It is also
possible that higher-rated students have better developed writing skills and are able to express themselves more easily in written form than their lower-rated counterparts.

Gender did not make as much difference as academic rating, with females (38%) slightly more likely than males (31%) to refer to the new strategies. A substantial discrepancy was found by school, however, and upon further analysis the difference appeared to be the result of implementation effect. That is, students in schools instructed by the same research assistant tended to be more similar in their reference to the new strategies than they were to students who were taught by a different research assistant. The percentages per research assistant were 62% and 54%, 49% and 36%, and 10% and 3%. The higher percentages were not consistently related to the socioeconomic level of the school. These findings attest to the important role that the teacher plays in classroom instruction. The three research assistants had undergone identical training and had identical materials to use during the instructional sessions, yet their style of implementation did not achieve consistent results.

The most impressive finding, however, is the fact that so few children overall referred to the new active listening strategies. Whenever the research assistants entered the classrooms, the emphasis was on listening. After four weeks of repetitive instruction, one could easily conjecture that the students would automatically associate the presence of the research assistants with the active listening strategies. Yet only one-third of the students appeared to do so. At the end of the study, when asked to respond to the question, “What are some things you know to do in order to be a good listener?” nearly two-thirds of the students either wrote “listen” or resorted to familiar epithets
they had heard over and over during their school experiences. Most common among these were "be quiet" or "keep your lips closed," "keep your body (hands and/or feet) still," and "look at the person who is talking." Twelve students offered responses that were considered to be irrelevant. These included three who answered "Yes," two who said "play," and two who said "be nice/do good things." One said "read a book" and another said "finish all my work." The other responses included "numbers," "if you have to call your mom and dad, then call them," and "take a shower when my dad tells me to."

The diversity of responses represents a wide range of individual differences in students' ability to integrate new information, even when it is overtly presented in a repetitious fashion. Deeper probes of nine students through individual interviews showed that some students could name the active listening strategies even though they had not mentioned them on their written questionnaires. Yet the new strategies were not what came to their minds upon initial querying. Even if they were, some students chose to write answers that were within their personal repertoire of spelling words.

Student responses confirmed the difficulty of expecting students at all the developmental and ability levels that are represented in a typical classroom to assimilate new information equally when presented in whole-class format. Analysis of student responses in the current study supports the contention that teachers cannot assume that their students are learning just because they have encountered repeated exposure to the information. Likewise, teachers cannot assume that their students have not learned new
material based on written responses to questions as second-grade students' literacy skills are not as developed as their oral skills. Further probing may be needed to uncover students' actual knowledge.

It would be presumptuous to assume that students who did not immediately name the strategies, or even those who did not mention them during probes, had not benefited from the instruction in any way. It is fair to assume that students represented the gamut of strategy acquisition development (Miller et al., 1986), with some exhibiting production deficiencies, others exhibiting control deficiencies, still others having utilization deficiencies, and some engaging in effective strategy use. Miller and Weiss (1982) found that children's knowledge of identifying factors that mediate attention precede the ability to apply the knowledge. These studies support the understanding that strategies advance in stages rather than all at once. Through observation of their more advanced peers during class discussions, some students may have moved ahead in their levels of metacognition concerning strategy use. An early awareness of the potential of using strategies may have been awakened, not to an extent that became overt during the course of the study, but enough to bring a student to higher levels of strategy use earlier than may have occurred without the opportunities provided through the study. The stage of emulation may be reached sooner as a result of observing peers' success with the listening strategies.

The information derived from analyzing student responses concerning adoption and use of the active listening strategies illustrates the complexity of analyzing results.
of the goal-setting strategies. Both quantitative and qualitative data were triangulated in attempts at understanding how the strategies may have impacted either students' performance or self-efficacy.

Effects of Goal Setting on Student Performance

Difficulties arose in the attempt to measure changes in student performance over the course of the study, making it impossible to answer the first research question in a meaningful way. The story presentation schedule had been developed so that the first and eighth story would be the same across all schools and conditions, making analysis comparable and meaningful. The variation in task difficulty due to variance in the readability level of the stories, however, subverted the possibility of comparing the stories. Although the SRA Listening Skill Builder Level 1b selections had been compiled for second grade, actual engagement with the stories proved that the levels were not as consistent as had been anticipated. Readability scores derived after completion of the study verified the assumption. The first story (rated as grade level 3.5) was the easiest of the eight stories and the final story (rated as grade level 3.9) was the second easiest. Student scores reflected the readability levels more closely than they reflected the goal-setting conditions.

The middle six stories had been counterbalanced across schools in an effort to offset anticipated differences in difficulty. Readability scores of those stories ranged from 4.2 to 6.2 and student scores across those six stories were consistently lower than the first and last stories, regardless of condition. This study was based on the premise that if young students were given a concrete measurable task they would be able to
make adequate efficacy judgments about their ability to succeed on future tasks. The unexpected inconsistency in task difficulty not only made comparisons of students' performance scores unrealizable but added to the complexity of students' making judgments on how well they would do on the next story.

Even though it was not possible to answer the research question on student performance, the means of student scores on the eight stories (Figure 6) do not show the level of improvement that was predicted. A combination of factors may have exerted an overall negative influence on student performance during the study, contributing to the lack of improved performance from beginning to end. These include the difficulty of the task, the temporal context of the study, and the lack of control of variables that exists in a natural classroom setting.

Task difficulty. Task difficulty is a critical feature in goal-setting investigations. Although Schunk (1983d) found that children who had more difficult goals performed at a higher level than students with easier goals, the positive effects were only exhibited when students had sufficient ability to reach the goal. Goals needed to be realistic and attainable if they were to exert positive effects. The inconsistency of readability levels of the stories made it difficult for students to judge their future performances, even when they were attempting to use available information. More astute students were able to articulate their dilemma as some of them said, "It depends on the story" when asked to set a goal for a new story.

In addition, listening itself is a complex task involving several elements. According to Wolvin and Coakley (1988), listening consists of the three components of
receiving, attending to, and assigning meaning. Memory, concentration, and vocabulary are critical features of these components that may not be within the individual's control, regardless of the level of effort and motivation. It was not possible to analyze the data to discriminate between the three components. That is, no data were gathered to determine if students were unsuccessful in answering questions correctly because of inadequate levels of attention or concentration, behavior that may or may not have been within their control, or if their personal memory store simply did not include enough background information to assign meaning. The receivers' points of view create the perceptual filter that influences the meaning that is eventually assigned, adding to the difficulty of assessing results of student performance.

A disadvantage resulted from using the whole-class approach to the instruction due to differences in individual student ability. Story difficulty could not be adjusted to account for varying levels of language development present in heterogeneous classrooms such as the ones participating in the study. The stories needed to be difficult enough to avoid creating a ceiling effect. Yet the difficulty level may have precluded some students from experiencing enough success to feel efficacious. Students with higher teacher ratings outperformed their lower-achieving peers. Good teaching practice consists of setting up multiple successes for students to experience when using the strategy to artificially induce the desired effects. A tension arose between the application of good teaching practice and the necessity of avoiding a ceiling effect.

The selected task thus created problems on two levels. The inconsistent and unpredictable level of difficulty of the stories exacerbated the comprehension problem.
for students, and the innate complexity of listening comprehension was exacerbated by students’ wide range of personal backgrounds and abilities.

Temporal issues. Current theory in education psychology acknowledges that learning is situated, or interactive with the surrounding environment (Greeno, Collings, & Resnick, 1996). Several events occurring during the course of the present study had the potential of impacting student performance more negatively than positively.

First, the study was implemented quite early in the school year and most classes had only been together for one or two weeks prior to initiation of the study. Classes were not yet “settled in” during the early weeks and individual teaching styles of the classroom teachers had not come into full effect. As the study progressed, teacher effects became more apparent and classes began to develop more stable characteristics based on the expectations and priorities of the classroom teachers.

Second, an historical event, the terrorist attacks of September 11th, occurred just as the study was beginning and it is impossible to gauge the impact it exerted over all constituents. Throughout the six-week course of the study, tensions were at a high level across the nation and it would be safe to assume that such a tragic event affected the students and teachers involved in the study to some extent.

Third, the sixth week of the study came at the end of October during the Halloween season. From personal experience and discussions with colleagues over the past 20 years, this time period is traditionally regarded as less productive in the classroom than normal school weeks. Second-graders experience a high level of excitement and anticipation for the costumes, parties, school parades, and trick-or-
treating associated with the season. Many students typically consume inordinate amounts of sugar and get less sleep than usual, adding to their levels of excitability. I observed one research assistant conducting a classroom lesson during this time period. She recognized the unusual activity level of the class and responded by saying, “I know it’s hard to concentrate because you’re thinking about Halloween right now, but let’s try to keep our minds focused on the story.” It is possible that student performance was negatively impacted at the end of the study by reactions related to Halloween.

*Natural classroom setting.* Classroom research has been acknowledged as an inherently messy endeavor (Turner & Meyer, 2000). Although research conducted in controlled laboratory settings has the advantage of eliminating much of the “noise” that confounds data analysis, the fact remains that much student learning, and even potential student learning, occurs in the context of a classroom setting. Unfortunately, the natural classroom setting yields a situation where it is virtually impossible to control for influential variables that fall outside of the focus of the study.

The classroom teacher undoubtedly exerted the most influence over class variance. Two of the 18 teachers were males; teaching experience ranged from 2 years to 30 years. Classroom climates became increasingly differentiated over the course of the six weeks as the 18 teachers’ varying styles and expectations were established. Research assistants reported a variety of observations between classes and teacher expectations. For instance, in some classrooms the teachers always had the students prepared when the research assistants arrived. Desks were cleaned off and students were anticipating the upcoming listening lesson. In other classes, the teacher and students

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seemed surprised to see the research assistant and the first few minutes of the time together was spent in transitioning from prior activities to the new ones. The expectation for level of attention to be given to the teacher also varied. Some students in more relaxed classrooms mentioned that they had learned “don’t get a drink” and “raise your hand to speak” from the listening lessons. In other classrooms such behaviors were expected all the time. The teachers also displayed varying methods of gaining students’ attention and of responding to their students.

Physical space, affected in part by the number of students, was a feature of the external environment that varied by school and by classroom. Class sizes ranged from 19 to 25 students. Some classes included special needs students who either had aides in the classrooms with them or frequently went in and out of the classroom. Some room arrangements seemed small and students were seated closely together with little space to move around, while other rooms appeared more spacious and inviting. Some classrooms had centers set up and students were invited to move around the room while others did not. Most of the classrooms were attractively decorated and well organized. Teachers had established varying routines for listening to stories. Most had carpeted areas where children typically gathered on the floor for read-aloud periods.

Despite many similarities in facilities, available resources, and curricular expectations, each class nevertheless was a unique unit. Early in the study, some classes began to demonstrate a higher sense of community and higher levels of motivation based on their teachers’ expectations. Such differences in class characteristics may have impacted the performance effects in the current study. At least three teachers who had
been traditionally recognized as exceptionally strong had classes that were randomly assigned to the control condition.

Two reviewed studies on goal-setting that did not have the expected positive effect on performance (Sagotsky, Patterson, & Lepper, 1978; Shih & Alexander, 2000) had some similarities to the current study. Sagotsky, Patterson, & Lepper (1978) suggested difficulties in student estimation of performance because the math problems the students were completing varied in number and difficulty from day to day. Although such a problem was not anticipated at the onset of the current study, the readability levels of the stories may have created a similar barrier for accurate student judgment. In the Shih and Alexander (2000) study, the authors surmised that the salience of information provided on bar graphs may have induced students to set goals spontaneously and implicitly, rather than based on realistic judgments. It is possible that the bar graphs also detracted from student performance in the current study. It is interesting to note that these two studies were also both conducted in natural classroom settings. Perhaps it is the complexity of the natural classroom setting that has produced the greatest impact on student performance.

Summary. Student performance did not improve over the course of the study, even though all students received instruction on using specific listening strategies and some students participated in a goal-setting activity. Yet concerns about task difficulty, the temporal setting, and the masking of effects due to the study being conducted in the natural classroom environment preclude arriving at a conclusion that strategies are not effective in improving performance.
Effects of Goal Setting on Student Self-Efficacy

Prior to initiation of the study, I predicted that student performance would improve as a result of students' awareness and use of the listening strategies. In addition, I predicted that students who used goals would perform at a higher level than those who did not. The increased performance was expected to give children feedback that would cause them to raise their self-efficacy for future similar tasks. Student performance, however, did not improve as anticipated, though many of the confounding factors listed above certainly contributed to the results. Changes in self-efficacy that occurred must have resulted from factors other than improved performance. In this section I discuss findings related to self-efficacy at two levels, specific self-efficacy and general self-efficacy.

Specific self-efficacy. Specific self-efficacy was measured using a task that was nearly identical to the task in which students participated throughout the course of the study. A story was read aloud to each class from the SRA Listening Skill Builders Level 1b booklet. The research assistants then read aloud questions related to the story, but answer choices were not given as they had been during the actual listening lessons. Students were asked to use a bar graph to record on a scale of 1-10 how many questions they believed they would be able to answer correctly based on the questions they had heard. On both the pretest and posttest, students were given just one bar graph with 10 squares on which to record their predictions. There were thus no other graphs visible for
students to use as a comparison. Students' predictions of how many questions they believed they would be able to answer correctly served as the measure of efficacy for the specific task.

In comparing prediction changes from pretest to posttest, statistical analysis revealed that students in all three conditions improved in specific self-efficacy over time. It is interesting to find that students' efficacy improved even though their performance did not. Such a finding supports the possibility that it may be easier to change second-graders' self-efficacy than it is to change their performance level. While performance demands a level of skill for success to be reached, self-efficacy is a personal judgment based on multiple factors unique to each individual, thereby making it more arbitrary and contingent on individual interpretation. If the other three sources of efficacy development, (i.e., vicarious experiences, verbal persuasion, and physiological states) are positive, perhaps the lack of mastery experience can be negated for a period of time.

*General self-efficacy.* Comparing student pretest and posttest scores on a set of three items measuring students' general self-efficacy for a listening task yielded statistically significant differences across time for all three conditions but not between conditions. Such a finding is encouraging when considering the previous discussion about the difficulties faced in getting students to adopt new strategies that have been repeatedly presented and discussed. It is intriguing when it is known that students' listening efficacy improved even when their performance did not. Key mechanisms that are triggered by the use of goals, according to Locke et al. (1981), include direction of
attention and action, activation of energy or effort, increased persistence, and
motivation for the development of strategies to attain the goal. Even though no
statistically significant effects were found from the use of a goal-setting strategy, it is
possible that students who had goals were implicitly influenced by these mechanisms
but the variance in task difficulty blurred the effects. Students may have felt an
increased sense of control related to a combination of factors, including the listening
strategies, their familiarity with the task, and their acknowledged maturity.

Qualitative data collected from the questionnaires provided a different measure
of general listening efficacy. Responses to the question, “Do you think you are a better
listener now than you were when we started the stories?” were taken as a simple probe
into students’ self-judgments. “Yes” and “no” responses were coded across condition,
gender, teacher rating, and school setting. Analysis revealed that control group students
(8.6%) responded “no” at a lower level than the goal groups; student-set goal groups
had 11.6% “no” responses and teacher-set goal groups had 15.6% “no” responses,
nearly twice as many as the control group.

As previously discussed in Chapter 4, it is possible that the students in the
teacher-set goals condition felt more frustration as their goals were increasingly raised
and it became more difficult to reach them. Because the students who set their own
goals were able to exercise more control over their goals, they may not have become
quite as frustrated as the students in the assigned goals condition. Not having any goals
upon which to judge their performance may have protected the control group from the
sense of failure that may have accompanied the task when students did not reach their
goals. The students with goals may have attended to their performance at a higher level than the students with no goals because they were able to make comparisons between their goals and their performance at the end of each lesson. The feedback derived from these comparisons may have enhanced their ability to make more realistic judgments about their performance. As previously noted, however, "no" responses did not always indicate lower levels of self-efficacy for listening. Many of the high students said "no" because they believed they had been good listeners when the stories began and still were at the end.

Looking at the student responses from the opposite perspective, the number of students who said "yes" they were better listeners at the end of the study is encouraging when considering the effects of strategy instruction on student efficacy. High percentages, 88.4% percent of the student-set goals students, 84.4% of the teacher-set goals students, and 91.4% of the control group, believed they had improved over the course of the study. From their written responses to the question why, their attributions fell into three major categories, including (1) use of the listening strategies, (2) practice, and (3) maturation. Only one student in the entire sample attributed her listening progress to goal setting, and that was in a negative way. The high female, who had experienced setting her own goals, said that she had become a better listener "by setting a lower goal." Thus, it appears that any effects on self-efficacy that were brought about by the goal-setting strategy occurred implicitly, without students' awareness.

The wide range of responses across the conditions attests to the different levels of student cognition one should expect from second-grade students. The gamut of
attributions ranged from the high female who eloquently wrote that she had improved because “Before I didn’t know how to use my head. Now I make pictures in my mind to understand the story better. When I imagine I’m really there it helps tell me what’s happening in the story” to the medium-ranked female who attributed her improvement to maturation, saying “because my ears got bigger.”

The same “yes” and “no” responses were analyzed by gender, academic rating by teacher, and school. Percentages of male and female students who believed they were better listeners at the end of the study were equal, with 86% “yes” responses for males and 87% “yes” responses for females. High and medium ranked students were also fairly equal, with 86.7% “yes” responses among high students and 87.4% “yes” responses among medium students. Low students were even more positive in their “yes” responses, with 90% feeling that they had improved. Their judgments were not in line with their actual performance, however, as the low students performed at a lower level than other students on the listening tasks. Whether the low students were exhibiting a level of resilience they had adopted in order to persevere through frequent failures, or whether their positive results were indicative of lower abilities to make accurate judgments about their performance, is unknown. It is also possible that they had simply adopted lower levels of self-expectations and were satisfied with performances that were lower than those of their peers.

The large discrepancy that was found between schools in the number of “yes” responses was interesting as it did not correlate with research assistant or socioeconomic status of the school. In School #5, 95% of the students believed they
were better at listening by the end of the study. Schools #1 and #4 had an 88% “yes” response, Schools #2 and #6 had an 83% “yes” response, and School #4 had an 80% “yes” response. School climate may provide the most tangible explanation for this finding.

Cross-case analysis of oral responses provided by the nine interviewed students did not reveal any emerging patterns that aided in understanding student efficacy attributions. Eight of the nine students stated that they felt more efficacious at the end of the study, but the ninth student said she had always been good at it and still was, also indicating positive self-efficacy. What did emerge from the interviews, to a deeper extent than was evident from the written responses of the entire sample, was the wide discrepancy between students in their metacognitive awareness and in their ability to articulate their thoughts. Dialogue taken from original transcriptions of the student interviews revealed both of these differences between students. Some students required many probes before responses were given and then seemed to base their responses on the information garnered from the probes. Many of the questions were higher level questions that asked the students to engage in conversations at a level not often required of them. Yet they did their best to make sense of the questions and to give reflective answers based on their own individual levels of language development.

One commonality that emerged throughout all of the interviews was that each student talked about an increased level of efficacy for listening. From the observations and comments of the research assistants, it was apparent that all of the interviewed students enjoyed the interviews, and undoubtedly the one-on-one adult attention they
received as a result of participating at the interview level. One research assistant mentioned that Gavin's interviews were held during his class's recesses, an event that was highly pleasurable for him. The research assistant was impressed with the fact that, although Gavin was very aware he was missing his recesses, he willingly agreed to be interviewed and remained enthusiastic throughout both interviews. Jody's research assistant noted that Jody had expressed disappointment at the end of the second interview that she would not have another opportunity to meet individually with the research assistant.

The positive affective reaction was also apparent in the classrooms as research assistants frequently mentioned that students looked forward to their arrival and seemed to enjoy hearing the stories and answering the questions. Even the classroom teachers expressed a high level of satisfaction with the content of the instructional sessions. They requested copies of the listening strategies so they could post them in their classrooms for future reference. Copies of the posters that were used during the study were provided to each of the participating classroom teachers. In addition, the listening strategies were also quite adaptable for improving reading comprehension and most of the teachers indicated that they planned to incorporate them into their reading programs during the rest of the year.

Goal-setting strategies

Schunk (1990) recognized the properties of specificity, proximity, and level of difficulty as important for their influence on students. In the present study, the goals were both specific and measurable; they were also proximal. That is, the students
checked their performance accuracy immediately and recorded their correct number of responses beside their individual goals, enabling a fast comparison. Because the level of difficulty of the stories varied more than was anticipated from the leveled listening series, however, students had trouble making accurate judgments for setting new goals. Some of the students who set their own goals showed evidence of having engaged in the self-regulatory subprocesses of observing, judging, and reacting to progress (Schunk, 1990) because they adjusted their goals based on their prior performance. Others picked a goal and stuck to it regardless of their attainment of past goals. Still others were overheard by the research assistants to say that they were “making a pattern” as they colored in their goal graphs. Lower achieving students appeared to be more satisfied with their performance, regardless of how well they did, while higher ranked students judged themselves more harshly. Personal expectations for performance, as predicted, influenced the judgments students made.

A likely confounding factor in the student-set goal condition is the interpretation that students gave to the term ‘goal.’ It is highly probable that students’ understandings varied from individual to individual. That is, some students may have defined the word ‘goal’ as the score they wanted to get regardless of whether they believed it was realistic or attainable. Other students may have made more accurate judgments, thus setting goals that they believed were actually within their reach based on their prior experience. Examples of both of these behaviors were articulated during the in-depth student interviews.
Because an individual's level of commitment to reach a goal affects future performance, it might be expected that self-set goals would generate a higher performance. As in previous research with adults, however, (e.g., Latham & Lee, 1986; Locke & Latham, 1990a), assigned goals were as effective for the second graders as individually set goals. Because the assigned goals were set by an authority figure, students may have inferred that they were expected to perform at that level. Students in the teacher-set goals group generally performed above their goals early in the study when the goals were low, but later performed below their goals as they gradually increased. Even though it was anticipated that as students became familiar with the listening strategies and the practice effect came into play their performance would improve, that was not the case. Students in the assigned goals group thus felt more frustration with their performance than other students by the end of the study.

It is possible that spontaneous goal setting, both in the control group and in the teacher-set goals group, masked effects of the goal-setting strategy on student performance. Students in the control group talked about how they had tried to get all of the answers right, an implicit goal that suggests that many students in the control group were not truly operating at a no-goals level as intended. In addition, during their interviews some students in the teacher-set goals condition indicated that they had set personal goals that were different than those assigned to their classes, again muddling results.
Implications

Finding ways to facilitate the development of positive self-efficacy beliefs early in the schooling process is important for successful academic achievement. A few previous studies (e.g., Gaskill, 2000) have shown that second-grade students do have the cognitive capacity to make accurate predictions based on their prior performances when the task is concrete and simple. Their performance and their self-efficacy can be positively influenced by learning a strategy that helps them to regulate their behavior, such as using a sorting strategy to enhance memorizing a list of words. The present study was an effort to extend the findings from earlier research. Yet complexities of context and the task undermined the anticipated effects. Nevertheless, promising findings have emerged that provide implications for educators working with second-grade students. These include utilizing differences in the varying degrees of cognitive development of students within a classroom, capitalizing on instability of students’ beliefs about competence, and recognizing the centrality of context in primary-grade instruction. Finally, the importance of refining measures for assessing young children’s self-efficacy is discussed.

Utilize Differences in Cognitive Levels

Developing self-regulation involves student adoption of personally initiated processes and responses for improving their ability and learning environments (Zimmerman, 1990). Educators who are proactive in helping their students to learn specific strategies optimize students’ ability to transfer control from others to themselves. Many consider second-grade students to be too young and immature to
assume control of their cognition, emotion, motivation, and environment. Some may be.
Young students lack experience in self-regulatory behaviors, they are less likely to
engage in reflection, and are often unable to articulate abstract beliefs. While some
display the misconceptions associated with young children, others function like older
children. Findings from the present study indicate that there are second graders who
were quite capable of not only adopting self-regulatory strategies but of using them
explicitly and understanding the benefits they derive from them.

Social cognitive theorists (e. g., Bandura, 1997; Zimmerman, 1989b) stress the
triadic reciprocality of environmental, personal, and behavioral determinants on
development. The early stages of self-regulation are largely social, relying on
observation and then emulation of others. Students construct an understanding of tasks
based on their own experiences and through observing the experiences of others. The
classroom, with the wide diversity of individual abilities and experience, provides the
ideal context for students at all levels to observe others participating in new strategies
that scaffold them to higher levels of self-regulatory functioning.

In the present study, there were always students who were able to give
appropriate examples of strategy use during class discussions. Students in all classes
described how they had used specific listening strategies and why, offering both
procedural and conditional knowledge. Students also described how they had
determined where to set goals or publicly reflected on their success, or lack of success,
in reaching goals. Perhaps the opportunity to reflect on the use of goals and listeing
strategies was the greatest benefit that students derived from this study. For students
who were in the zone of proximal development for engaging in reflective behavior, the opportunity to observe and emulate their peers engaging in the activity may have provided the impetus to move forward to a higher metacognitive level than would have been possible without the modeling of provided by others. The discourse provided by peers allowed frequent opportunities for other students to observe and emulate their behavior. Based on Zimmerman’s (2000) theory of the development of self-regulation, we would predict that these experiences would move the students forward in their own future attempts at self-control and self-regulation.

*Take Advantage of Instability*

Results of the data collected during this study were unexpected and disappointing in two ways. Student performance did not improve over time and goal setting did not appear to make any significant difference. Yet all students’ self-efficacy improved, whether they were in a goal-setting group or not. It is difficult to attribute their improved self-efficacy to any one factor but the combination of the listening strategies, practice, and maturation most likely exerted varying levels of influence in different children.

Despite repetition of the listening strategies over the period of a month, less than half of the students attributed their perceived improvement in listening to those strategies. Even though overall listening performance on the tasks did not improve, students maintained a high perception regarding their ability to do well on future tasks. Nearly all of the students were positive about their performance on the listening tasks. Whether students had actually adopted the use of the listening strategy for personal use...
or not, they had been exposed to strategy use that may have laid the groundwork for future growth. Many seemed to sense that their performance would improve because they knew about the strategies. Their optimism remained high in spite of the difficulties they encountered when presented with a listening task that was harder than they had anticipated.

Students’ improved self-efficacy is in keeping with Bandura’s (1997) contention that self-efficacy is malleable early in its development. To educators of young children, this should be considered to be a very positive attribute. Most children come to school full of optimism and enthusiasm. During the course of formal education, their self-beliefs become increasingly stable. Teachers of young children have the power to create classroom environments where students can feel safe to progress at their own levels, to take risks in their learning, and to maintain high perceptions of competence.

Findings of this study seem to indicate that educators can capitalize on young students’ beliefs that knowing a strategy helps them to perform better, whether the belief is realistic or not, at least during the stage of instability. As Bouffard-Bouchard et al. (1991) found, students’ perception of reality had more impact on motivation and behavior than their actual skills did. Behavior is mediated through efficacy perceptions, both by affecting motivation and by the subsequent outcome. An upward positive spiral is initiated as students who believe they have access to a useful strategy have a higher level of efficacy for the task, thus triggering the influences associated with efficacious behavior. Those include selection of more difficult tasks, and deeper engagement with these tasks in the form of effort expended, persistence even through difficult times, and
resilience in the face of temporary setbacks. The students in the present study seemed to engage in these behaviors, maintaining their sense of control despite a lack of improved performance. It would have been instructive to continue the study for a longer period of time to see if performance would have improved or if efficacy judgments would have deteriorated.

That students maintained and even improved their efficacy levels, despite whole-class instruction at the same level for widely disparate abilities, attests to the resiliency and optimism of second graders. Successful educators, however, have the option of adapting instruction to fit the needs of individual students, scaffolding each student to success as necessary, thereby guaranteeing development of positive levels of self-efficacy for academic tasks.

Consider Context

Context is central in the investigation of self-regulated learning. Classroom characteristics differ substantially in terms of opportunities to collaborate, type of instruction and inquiry, and the curriculum. Early self-regulatory behaviors are social in nature as the opportunity to observe others provides the scaffolding that leads to the next stage of emulation. Particularly in the early grades, it is important to develop classroom climates that provide discourse that draws student attention to behaviors that will help them to shift from control by others to self-control. Practice that provides students the opportunity to exercise personal control is crucial as self-regulation cannot occur when no choice is offered. Individual differences must be recognized, understood, and valued to optimize benefits to all students. A climate of acceptance, tolerance, and
appreciation for the variety of views represented in a classroom setting is important for encouraging students to take the necessary risks involved in emulating new behaviors and adopting new beliefs.

The role of context was revealed in a variety of ways in the present study. One of the most evident was the manner in which students had adopted the particular listening strategies they had encountered on a frequent basis, such as "look at the person who is talking," or "stop, look, and listen." Their written and oral responses were shaped by the environmental practices to which they had been exposed. Students tended to repeat such responses even when they were not relevant, possibly reflecting a desire to please the teacher (or the research assistant) by doing what is expected in school. The student interviews seemed to provide many examples of responses that were based on the tone or the terminology of the question. While such responses make interpretation difficult, the frequency of this behavior may signify the powerful role of school in general and the context in particular, in shaping student beliefs. It is apparent that students are beginning to understand that there are certain expectations for school and they take those expectations seriously.

Because of the centrality of context, research that is based in the natural classroom setting is necessary, even though messy. We have learned that it is possible to substantiate positive effects of strategy training when appropriate tasks are identified and studied in the isolated lab setting. It is difficult, however, to replicate studies relying on the simplicity of tasks in a whole-class setting where a myriad of confounding variables exert their influence. Yet, that is the context in which our educational system
resides. The tension between the need to conduct relevant research for educators and the need to control for extraneous variables was exemplified in the current study.

Findings in lab studies, though certainly relevant to our understanding of student learning, need to be pushed forward to the real world of educators and students. The work of educational psychologists is only relevant if their findings eventually filter down to educators and impact student learning. Conducting research in actual classrooms, even with the associated inevitable messiness, has a higher likelihood of lending credibility to educators who may then be more likely to adopt the findings and incorporate them into their teaching repertoires. Achieving positive benefits as a result of using new practice may eventually be recognized by the relevant policy arenas and impact decisions that affect our educational system.

Refine Self-Efficacy Measures

It could be argued that the measures of self-efficacy used in the present study were insufficient and unreliable. The point is well taken. Students' specific efficacy was measured on the basis of their prediction of performance similar to the tasks that they had recently experienced. Their general self-efficacy was measured by summing scores recorded on bar graphs in response to questions about how "good" they thought they were on several listening skills. Yet traditional scales have not been developed to measure children's efficacy for specific tasks. Even if they were available, it would be difficult to ascertain whether they were providing adequate measures either. Self-efficacy is based on cognitive perceptions, not reality, so I contend that asking children how good they think they are at performing a task elicits a straightforward response
from them. If the responses do not measure self-efficacy in the traditionally accepted manner, they should be thought of as at least measuring precursors of self-efficacy that are just beginning to develop at this stage.

Recommendations

Findings from the present study appear to unearth more questions than they answer. There remains a need to demonstrate that second graders are capable of making accurate judgments of their own self-efficacy given appropriate tasks. In addition, there is a need to identify ways in which educators can scaffold students to increasingly higher levels of self-efficacy for academic performance. The large scale of this study demanded that a task that was highly valued by all constituents serve as the focus of the research. Use of the skill of listening as a vehicle for measuring changes due to goal setting, however, weakened the results of the study because of the inherent complexity of the listening task.

More research is warranted to investigate young students’ strategy acquisition and resultant effects on self-efficacy. Future research should seek to enhance the findings of the present study in several ways.

- Refine the listening task to investigate individual elements of listening rather than lumping them all together into one complex task. Gear the task more closely to student academic achievement levels, perhaps through grouping, so that relative levels of difficulty could be kept consistent for all students.
• Refine the measures used to assess the complex construct of self-efficacy.

The self-designed assessment tools used in the present study were admittedly limited in their validity and provided rudimentary measures at best. The lack of agreement that was found during methodological triangulation could be a result of the ineffectiveness of the measures. Based on an emic knowledge of second-grade cognitive levels, the current measures were deemed to be an appropriate beginning. Yet much work remains to be done in the development of scales for measuring self-efficacy in young children.

• Replicate the present study under different temporal conditions. The timing of this study was the least favorable of all possibilities. The combination of the inconsistencies related to beginning a new school year, the indiscernible effects of the terrorist attacks of September 11th, and the acknowledgement of influences resulting from Halloween activities had the potential for affecting overall results. Conducting a similar study later in the school year, even with the risk of similar influences of different time-related conditions, would provide the students more time to have become readjusted to the school setting in general, as well as their new class setting in particular. The students would overall have gained a few months in maturity as well, offering the possibility of greater access to their thinking.

• Replicate the study in a different school setting than the suburban school district in which this study was conducted. Results found from the students
in this district, where 90% of the graduates go on to higher education, may be very different from results of a similar study conducted with students in a larger urban district.

- Explore elements of the present study to a deeper extent. For instance, examine differences between students for whom English was not their first language. Investigate the effects of home reading practices early in the students’ lives. Delve into specific effects exerted on student-set goals by the varying readability levels of the stories.

- Design studies that examine the effects of other learning strategies on young children’s academic performance and self-efficacy. Such studies should include in-depth use of observation and interviews of students in order to more clearly understand early thought processes. Through isolation and examination of the effects of developmentally relevant learning strategies on appropriate tasks, identification of specific strategies that are particularly accessible and useful to second graders may be possible. Such practice can then be forwarded in teacher education programs.

Conclusion

Second-grade students’ self-regulatory behaviors, even though primitive compared to older students and adults, have a greater possibility of developing when educators provide opportunities in the classroom. Even though it may seem on the surface that students are not acquiring the strategies, despite frequent repetition, the effects simply may not be immediately evident. Individual students will derive different
levels of benefits, depending upon their current developmental status. Yet what is clear is that all students, whatever their developmental level, have a greater possibility of developing strategies to aid in their own self-regulatory behavior when their classroom environment includes training and opportunities. Practice in the use of simple cognitive and metacognitive strategies early on may enable students to reach an advanced level of coordination of more complex processes sooner than they would without early experience. Creating the social opportunities for observation and emulation of more advanced students is a critical aspect in the promotion of self-regulation.

The interaction between self-regulatory behavior and self-efficacy has been established. When strategy use is adopted, there is a greater likelihood of increased performance, or at least the perception of increased performance. The resultant success provides a basis for higher expectations for future performance. Even when young children do not experience the benefits of the strategy on an immediate basis, their resiliency prevails. Their higher efficacy judgments tend to be self-fulfilling as they then apply more effort and persistence to the task at hand. The upward spiral is activated. With the information explosion faced by today’s students, the need to learn more than declarative and procedural knowledge is critical. Educators who promote the adoption of self-regulatory behaviors, ultimately advancing students’ beliefs in their own capacity to function successfully, contribute to potential learning in a way that prepares students for the ever-changing world they will face. Our students deserve no less.
APPENDIX A

APPROVAL NOTICES FROM HUMAN SUBJECTS COMMITTEE
BEHAVIORAL AND SOCIAL SCIENCES
HUMAN SUBJECTS INSTITUTIONAL REVIEW BOARD (IRB)
THE OHIO STATE UNIVERSITY, Columbus, Ohio 43210

Research Involving Human Subjects

ACTION OF THE INSTITUTIONAL REVIEW BOARD

With regard to the employment of human subjects in the proposed research protocol:

01B0061  EFFECTS OF A GOAL-SETTING STRATEGY ON SECOND GRADERS' SELF-EFFICACY, Peter W. Demerath, Pamela J. Gaskill, Educational Policy & Leadership

THE BEHAVIORAL AND SOCIAL SCIENCES HUMAN SUBJECTS IRB HAS TAKEN THE FOLLOWING ACTION:

_______ APPROVED ______ DISAPPROVED

X  APPROVED WITH CONDITIONS *

WAIVER OF WRITTEN CONSENT GRANTED

* Conditions stated by the IRB have been met by the investigator and therefore the protocol is APPROVED.

It is the responsibility of the principal investigator to retain a copy of each signed consent form for at least three (3) years beyond the termination of the subject's participation in the proposed activity. Should the principal investigator leave the University, signed consent forms are to be transferred to the Human Subjects IRB for the required retention period. This application has been approved for the period of one year. You are reminded that you must promptly report any problems to the IRB, and that no procedural changes may be made without prior review and approval. You are also reminded that the identity of the research participants must be kept confidential.

Date:  March 30, 2001  Signed:  

(Chairperson)

HS-0258 (Rev. 2/94)

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RESEARCH PROTOCOL:

01B0061 EFFECTS OF A GOAL-SETTING STRATEGY ON SECOND GRADERS' SELF-EFFICACY, Anita Woolfolk Hoy, Pamela J. Gaskill, Educational Policy & Leadership

was presented for review by the Behavioral and Social Sciences IRB to ensure proper protection of the rights and welfare of the individuals involved with consideration of the methods used to obtain informed consent and the justification of risks in terms of potential benefits to be gained, the IRB action was:

_____ APPROVED

_____ DEFERRED

X APPROVED WITH CONDITIONS *

_____ DISAPPROVED

_____ NO REVIEW NECESSARY

- Changes proposed by amendment can not be initiated until conditions have been met.

PROPOSED CHANGES:

1. Change in Principal Investigator.
2. Expansion of the study to additional schools, with addition of 360 subjects.
3. Addition of an incentive.
4. Collection of reading scores from first-grade competency tests.
5. Revision of parent recruitment letters and consent forms.

* CONDITIONS/COMMENTS:

1. Revise the parent letters as follows, and provide copies to the IRB.
   - Include a request for consent to access first-grade reading scores.
   - Include information about the incentive.

2. Provide letters of support from the individual schools, when they become available.

If you agree to the above conditions, PLEASE SIGN THIS FORM IN THE SPACE PROVIDED BELOW AND RETURN WITH ANY ADDITIONAL INFORMATION REQUESTED TO THE Behavioral and Social Sciences Institutional Review Board, 310 Research Foundation, 1950 Kenny Road, Columbus, OH 43210-1063, within three weeks of the date shown at the top of the form. Upon such compliance, the approval form will be mailed to you.

Date: 8/3/01 8/3/01

Signature of principal investigator and all co-investigators

HS-025A (Rev. 2/92) (conditions/comments)
With regard to the employment of human subjects in the proposed research protocol:

**01B0061 EFFECTS OF A GOAL-SETTING STRATEGY ON SECOND GRADERS’ SELF-EFFICACY**, Anita Woolfolk Hoy, Pamela J. Gaskill, Educational Policy & Leadership

Request to amend the protocol as outlined in a letter dated July 26, 2001, was APPROVED WITH CONDITIONS by means of expedited review (category 7) on July 31, 2001. The following changes were approved:

(a) Change in Principal Investigator.
(b) Expansion of the study to additional schools, with addition of 360 subjects.
(c) Addition of an incentive.
(d) Collection of reading scores from first-grade competency tests.
(e) Revision of parent recruitment letters and consent forms.

**THE BEHAVIORAL AND SOCIAL SCIENCES HUMAN SUBJECTS IRB HAS TAKEN THE FOLLOWING ACTION:**

- **APPROVED**
- **DISAPPROVED**
- **APPROVED WITH CONDITIONS**
- **WAIVER OF WRITTEN CONSENT GRANTED**

* Conditions stated by the IRB have been met by the investigator and, therefore, the protocol is APPROVED.

- It is the responsibility of the principal investigator to retain a copy of each signed consent form for at least three (3) years beyond the termination of the subject’s participation in the proposed activity. Should the principal investigator leave the University, signed consent forms are to be transferred to the Human Subjects IRB for the required retention period.
- This application has been approved for the period of one year.
- You are reminded that you must promptly report any problems to the IRB and that no procedural changes may be made without prior review and approval.
- You are also reminded that the identity of the research participants must be kept confidential.

Date: July 31, 2001
Signed: [Signature]

(Chairperson)

HS-025B (Rev. 2/94)
With regard to the employment of human subjects in the proposed research protocol:

01B0061  EFFECTS OF A GOAL-SETTING STRATEGY ON SECOND GRADERS’ SELF-EFFICACY, Anita Woolfolk Hoy, Pamela J. Gaskill, Educational Policy & Leadership

THE BEHAVIORAL AND SOCIAL SCIENCES HUMAN SUBJECTS IRB HAS TAKEN THE FOLLOWING ACTION:

X  APPROVED

* Conditions stated by the IRB have been met by the investigator and, therefore, the protocol is APPROVED.

- It is the responsibility of the principal investigator to retain a copy of each signed consent form for at least three (3) years beyond the termination of the subject’s participation in the proposed activity. Should the principal investigator leave the University, signed consent forms are to be transferred to the Human Subjects IRB for the required retention period.

- This application has been approved for the period of one year.

- You are reminded that you must promptly report any problems to the IRB and that no procedural changes may be made without prior review and approval.

- You are also reminded that the identity of the research participants must be kept confidential.

Date:  April 5, 2002  
Signed:  
(Chairperson)
APPENDIX B

PARENTAL LETTER OF NOTIFICATION AND CONSENT FORM
FOR LEVEL ONE OF THE STUDY
Dear Parent/Guardian:

We all know how important good active listening is for success in school! This fall your child has the opportunity to participate in a series of lessons designed to improve his/her listening skills. This is part of a research project in which a teacher will come to the classroom twice a week for five weeks to read a story to the class and then ask questions about the story, a typical classroom activity. Your child will learn several important strategies for active listening that should continue to be useful after the study is completed. In addition, some of the children will set goals for their expected number of correct responses and some will not. The different groups will be compared to see if setting a goal made a difference in their listening performance. The goal-setting activity is an important part of this research study. Whether your child is in a goal-setting group or not, however, he/she will still receive all of the instruction on listening skills, hear the selected stories, and answer questions about the stories. This study should be useful in helping your child to develop learning strategies that may lead to improved performance in school.

This project is being conducted in 18 different second-grade classrooms by four research assistants. The research assistants are all experienced teachers who will be working under my supervision. I have been a second-grade teacher for 25 years and am conducting this study as a part of my doctoral program at The Ohio State University. I am looking forward very much to having your child participate in my study.

Your son's or daughter's participation in the study is voluntary. Participation or non-participation will have no effect on his or her academic standing. All information will be kept confidential by assigning a code number that will substitute for children's names on all materials. Students' names will be changed in any reports of the research. At the conclusion of the study, a report of the findings will be available. Any parent or guardian who would like a copy of this report should contact either myself or your child's teacher.

While all students in your child's class will be taught the listening skills, I need your consent to include the data from your child's performance. I would also like access to your child's first grade reading scores. To give permission to use your child's data and reading scores, please complete the attached consent form and return it to your child's teacher by Sept. 14th. Each student whose parent signs and returns this form will receive a choice of a pencil or candy as a thank you gift. If you have any questions related to this study, please feel free to contact me at home (889-0356) or my school (764-5940). Thanks for your cooperation!

Sincerely,

Mrs. Pamela Gaskill

Mrs. Pamela Gaskill

MrDr. Anita Woolfolk Hoy, Principal Investigator

Dr. Anita Woolfolk Hoy, Principal Investigator

Educational Administration

General Professional Studies

and Higher Education

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Consent Form

To give permission to include the results of your child's work, please do the following:

1. Sign this page on the lines provided below
2. Keep one copy of this form for your records
3. Return one copy of this form to your child's teacher by September 14th.

Your Child's Name ____________________________

Your Child's Classroom Teacher __________________________

Dr. Anita Woolfolk Hoy, Principal Investigator (my advisor), or her authorized representative, Pam Gaskill, have explained the purpose of the study, the procedures to be followed, and the expected duration of my child's participation. Possible benefits of the study have been described.

I acknowledge that I have had the opportunity to obtain additional information regarding the study and that any questions I have raised have been answered to my full satisfaction. Furthermore, I understand that my child or I are free to withdraw consent at any time and discontinue participation in the study without prejudice to my child.

Finally, I acknowledge that I have read and fully understand the consent form. I sign it freely and voluntarily, as does my child. A copy has been given to me.

Parent/Guardian's Signature_________________________________ Date ______________

Child's Signature___________________________________ Date ______________

Signed: Dr. Anita Woolfolk Hoy
(Principal Investigator)

Signed: Pam Gaskill
(Authorized Representative)

SECTIONS:

Cultural Studies

Quantitative Research, Evaluation and Measurement

Educational Administration and Higher Education

General Professional Studies

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APPENDIX C

PARENTAL LETTER OF NOTIFICATION AND CONSENT FORM
FOR LEVEL TWO OF THE STUDY
Dear Parent/Guardian:

Thank you for consenting to have your child participate in the research study on improving listening skills! At this stage, several students from each school have been selected for more in-depth interviews. The purpose of these interviews is to talk to the children about how they perceive themselves as listeners and to explore what skills they think lead to being a good listener. This will help us to understand how children of this age are able to talk about and understand their listening skills. At the end of the study, we will want to interview the same students again in order to see if the instruction had an impact on their perceptions. Your child has been selected as one of these special students for interview and has expressed a desire to participate in this way. However, we do need your permission once again before we can conduct the interviews.

These interviews will be audiotaped so that your child’s responses can be analyzed at a later date. In addition, if you agree to allow your child to participate at this level, the teacher at your school would also like to talk with you as well in order to see if you and your child hold similar views as to his/her listening abilities. Each child will be interviewed twice but the parent will have just one interview. This talk can be scheduled at your convenience, either by telephone or in person. The interview will take approximately 15-20 minutes. This will give you an additional opportunity to discuss your child’s self-perceptions about his school performance. I hope you will agree to participate in this manner. Your thoughts are very important to the study.

Again, your son’s or daughter’s participation in this aspect of the study is voluntary. Participation or non-participation will have no effect on his or her academic standing. All information will be kept confidential by assigning a code number that will substitute for children’s names on all materials. Students’ names will be changed in any reports of the research. The audiotapes will be used for research purposes only and will be erased upon completion of the research. At the conclusion of the study, a report of the findings will be available. Any parent or guardian who would like a copy of this report should contact either myself or your child’s teacher.

If you give permission for your child to participate in the interviews, please complete the attached consent form and return it to your child’s teacher by _______________. If you have any questions, please feel free to contact me at home (889-0356) or my school (764-5940). You may also contact the person who will be conducting your interview, Mrs. Carolyn Kovacs, at 365-5923. Thanks so much for your cooperation!

Sincerely,

Mrs. Pamela Gaskill, Authorized Representative

Dr. Anita Woolfolk Hoy, Principal Investigator
Consent Form

To give permission for your child to be interviewed, please do the following:

(1) Sign this page on the lines provided below
(2) Keep one copy of this form for your records
(3) Return one copy of this form to your child's teacher by ____________

Your Child's Name ____________________________
Your Child's Classroom Teacher __________________________

Dr. Anita Woolfolk Hoy, Principal Investigator (my advisor), or her authorized representative, Pam Gaskill, have explained the purpose of the study, the procedures to be followed, and the expected duration of my child's participation. Possible benefits of the study have been described.

I acknowledge that I have had the opportunity to obtain additional information regarding the study and that any questions I have raised have been answered to my full satisfaction. Furthermore, I understand that my child or I are free to withdraw consent at any time and discontinue participation in the study without prejudice to my child.

Finally, I acknowledge that I have read and fully understand the consent form. I sign it freely and voluntarily, as does my child. A copy has been given to me.

Parent/Guardian's Signature_________________________________ Date___________
Child's Signature___________________________________________ Date___________

Signed: [Signature]
(Principal Investigator)

Signed: [Signature]
(Authorized Representative)

SECTION:
Cultural Studies    Quantitative Research, Evaluation and Measurement    Educational Administration and Higher Education    General Professional Studies

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1. Hi ____________. Thanks for talking with me today. I'd like to ask you some questions so I can find out what second graders think. Is that okay with you? I'm going to record our talk today if that's okay with you? (get consent) First, I'd like to find out some things about you.

2. How old are you? When is your birthday?

3. What are some of your favorite things in school?

4. What are some things you don't really like about school?

5. Do you like to listen to stories?

6. Do your parents (or anyone else) read stories to you?

7. How often do they read to you?

8. What kind of stories (books) do they read to you?

9. Can you remember when you first started listening to stories? Tell me about it.

10. Can you tell me about one of your favorite stories?

11. Can you tell me about one of your favorite books or kinds of stories that your teacher has read to you at school?

12. Are you a good listener? Why do you say so?
13. Is it easier for you to be a good listener when you’re listening to a story at home or at school?
14. What are some things your teacher says you should do to be a good listener?
15. Do your parents tell you how to be a good listener?
16. What do they say?
17. Do you ever have trouble listening when your teacher is reading a story?
18. Do you ever have trouble understanding what your teacher is saying?
19. What do you do when you don’t understand what your teaching is saying?
20. Can you tell me about a time when this happened?
21. Can you think of a time when you thought what you heard meant one thing and you found out later it really was something else?
22. How did you feel when that happened?
23. Do you ever feel like you are really listening, but then you can’t remember something about a story when the teacher asks a question? Can you tell me about a time when that happened?
24. Do you think that happens just a little or a lot to you?
25. Does your teacher ever do anything that helps you to listen or understand better? Tell me what she does.
26. Have you ever wished she would do something different? What?
27. How about the other kids in the class? Do you think they listen better than you,
about the same, or worse? Can you tell me what makes you think that?

28. Do they ever do anything that makes it harder for you to be a good listener?
   Easier?

29. Can you think of some things you could do to help yourself listen and understand better when you're listening to a story?

30. Tell me some reasons you think it might be very important to be a good listener in school.

31. Do you know how to speak more than one language?
   If yes, what language(s) do you speak?

(If yes, ask Questions 32-35. If no, go to Question # 36.)

32. What language do you speak when you are at home with your family?

33. Is one language easier for you to speak than the other? Which one? Why?

34. How old were you when you came to this country?

35. What grade were you in when you came to this school?

36. Is there anything else you’d like to tell me about listening that you think I would like to know about?

Thank you very much for helping me today. You have been very helpful in teaching me what second graders think about good listening! Thanks!
APPENDIX E

GUIDE FOR STUDENT INTERVIEWS
AT CONCLUSION OF STUDY

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Hi __________. Thanks for talking with me again. I'm going to record our talk again today if that's okay with you? (get consent). I'd like to ask you a few more questions about listening now that we've worked on it in your classroom for a few weeks. Okay?

1. Do you feel like you are a better listener now than you were when we started the listening lessons? Why do you say so?

2. What are some strategies you know that can help you to be a better listener?

3. Have you tried any of these strategies? Tell me about it.

4. Did it help you? Why do you say so?

5. A. (For goal setting groups only) Do you think setting goals made any difference in how well you did on the questions? Explain.

B. (For control group only) Did you ever set any goals for yourself before you heard a story? If yes, tell me what you did.

6. (Ask all) If we read another story today, where would you set your goal? __________

7. How sure are you that you could reach that goal? __________ Why?

8. Why do you think that using a strategy helps people do better?

9. What did you like best about the listening lessons?

10. What was the most helpful to you?
Parent Interview Questions

Parent’s Name_________________________ Interviewer_________________________
Student_________________________ Date_________________________
Interview format: Face-to-face_______ Phone_______

1. Overall, how would you say (your child) is performing in school this year?

2. Tell me how you would describe (your child’s) listening skills and give me some reasons for your evaluations:
   - at home—
   - at school—

3. Please talk about any read-aloud activities that (your child) participates in at home.

4. Has (your child) had other opportunities to listen to stories read aloud other than at home or at school (e.g. library story hour, grandparents, babysitter, childcare)?

5. Generally, what kind of feedback does (your child) give you about his/her performance in school?

6. What are some suggestions you have given (your child) to help with listening skills for either at home or at school?

7. (If bilingual, in general, lead the parent to talk about percentages of first language/English spoken at home and open discussion to any problems they may encounter as a result of their bilingualism.)

7. What are your educational goals for (your child)?

Thank you so much for talking to me about your child. Hopefully, this study will provide him/her with some additional strategies that can help to improve his/her overall listening skills.
Teacher Interview

Teacher's Name ________________________ Interviewer __________________________

Student ___________________________ Date ______________________________

1. Overall, how would you describe (this child's) listening in class?

2. Do you notice any differences in types of listening, e.g. listening to directions, listening to lessons, listening to read alouds, listening to other students, etc.?

3. How much do you think his/her listening skills are having an impact on academic performance?

4. Have you ever talked to this child individually about listening? If so, what was the gist of the discussion?

5. Have you ever talked to this child's parents about his/her listening skills? If so, what was the gist of the discussion?

6. How often do you typically interact with this child's parents (as a volunteer, conferences, problems, etc.)?

7. How supportive do you feel this child's parents are of his/her academic achievement?

8. What is some evidence for this judgment?

9. Do you believe that this child is working up to his/her potential?
APPENDIX H

SAMPLE STUDENT ANSWER SHEET
FOR STORIES
How well did you listen?

1. Mr. Puffblow used to get very angry when
   a. mothers yelled at their children
   b. children stared at his hat
   c. people stepped in his garden

2. Mr. Puffblow would chase children away
   a. they might break his windows
   b. they made too much noise
   c. they wanted to steal his apples

3. When Mr. Puffblow went down the street, people would
   a. try to stay indoors
   b. make fun of him
   c. sing and shout loudly

4. Mr. Puffblow lost his hat when
   a. a child stepped on it
   b. a horse knocked it off into a puddle
   c. it blew away

5. When the West Wind got tired of playing with the hat,
   a. it dropped the hat in the brook
   b. it left the hat hanging in a tree
   c. it sailed the hat out over the ocean

6. The first field mouse found the hat because
   a. he had fallen into the brook
   b. he had seen it fall from the sky
   c. it fell on top of him

7. The field mice had fun using the hat as
   a. a boat and a house
   b. a car and a tent
   c. a Halloween costume

8. Mr. Puffblow and the children were in the woods
   a. to get out of school
   b. to watch the birds
   c. to have a picnic

9. Mr. Puffblow had not been nice when he wore the hat because
   a. it was too small and hurt his head
   b. he was afraid the children would laugh at him
   c. he was afraid of losing the hat

10. After the hat was found, Mr. Puffblow
    a. left it where it was
    b. put it on his head
    c. took it to the cleaners
APPENDIX I

STUDENT RECORDING SHEETS FOR GOAL-SETTING GROUPS
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APPENDIX J

STUDENT RECORDING SHEETS FOR CONTROL GROUP
APPENDIX K

OPEN-ENDED PRETEST QUESTIONNAIRE
COMPLETED BY ALL PARTICIPANTS
1. What are some things you know to do in order to be a good listener?

2. What do you do when you don’t understand something your teacher has read to you?

3. Does anybody read to you at your house? Who?

4. What do you do when you don’t understand something someone at home has read to you?

5. Is it easier for you to be a good listener at home or at school? Why?
APPENDIX L

OPEN-ENDED POSTTEST QUESTIONNAIRE
COMPLETED BY ALL PARTICIPANTS
1. What are some things you know to do in order to be a good listener?

2. Do you think you are a better listener now than you were when we started the stories?

   *Why do you say so?*

3. What helped you to answer more questions correctly?

4. If we read another story today, where would you set your goal? (1-10) ______

5. How sure are you that you could reach that goal? (1-10) ______

6. On the back, please write a retelling of your favorite story.
APPENDIX M

STUDENT RECORDING SHEET FOR
GENERAL SELF-EFFICACY PRETEST AND POSTTEST
APPENDIX N

INITIAL PRACTICE AND SURVEY QUESTIONS
Initial Practice and Survey Questions
(Teacher reads orally and closely monitors students as they record their responses)

Column A: Color in 3 boxes from the bottom up.

Column B: Choose a number from 1 – 10. Write it above Column B. Color in the number of boxes to show the number you wrote.

Column C: How much do you like to watch TV? If you like it only a little tiny bit, color in the first box. If you like it a little bit more, color in two boxes. Each colored box means you like it more than the last one. Color in the number of boxes that shows how much you like to watch TV.

Column D: How much do you like to listen to stories read out loud? Color in the number of boxes that shows how much you like to listen to stories read out loud.

Column E: How good are you at listening when someone at home is reading a story to you? Color in the number of boxes that shows how good a listener you are when someone at home is reading a story out loud to you.

Column F: How good are you at listening when your teacher is reading a story to you? Color in the number of boxes that shows how good a listener you are when your teacher is reading a story out loud to you.

Column G: When your teacher reads a story out loud, how well do you understand what it is about? If you usually have trouble understanding, color in one box. If you understand every single thing, color in all ten boxes. Or you can choose a number in between. Color in the number of boxes that shows how well you understand the stories your teacher reads out loud.

Column H: How important do you think it is to be a good listener in school? Color in the number of boxes that you think shows how important it is to be a good listener in school.
APPENDIX 0

FOLLOW-UP SURVEY QUESTIONS
Follow-Up Survey Questions

**Column A:** How much did you like listening to the stories I read?

**Column B:** How good were you at answering the questions?

**Column C:** How much did you learn about being a good listener?

**Column D:** How much do you like to listen to stories read out loud? Color in the number of boxes that shows how much you like to listen to stories read out loud.

**Column E:** How good are you at listening when someone at home is reading a story to you? Color in the number of boxes that shows how good a listener you are when someone at home is reading a story out loud to you.

**Column F:** How good are you at listening when your teacher is reading a story to you? Color in the number of boxes that shows how good a listener you are when your teacher is reading a story out loud to you.

**Column G:** When your teacher reads a story out loud, how well do you understand what it is about? If you usually have trouble understanding, color in one box. If you understand every single thing, color in all five boxes. Or you can choose a number in between. Color in the number of boxes that shows how well you understand the stories your teacher reads out loud.

**Column H:** How important do you think it is to be a good listener in school? Color in the number of boxes that you think shows how important it is to be a good listener in school.
APPENDIX P

OVERVIEW OF CHARACTERISTICS
OF THE NINE INTERVIEWED STUDENTS
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<tr>
<th>Student</th>
<th>Interviewer</th>
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<th>Teacher Rating</th>
<th>DRA Level</th>
<th>Ethnicity</th>
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Overview of the nine interviewed students.
APPENDIX Q

CLASSROOM OBSERVATION GUIDE
FOR RESEARCH ASSISTANTS
Classroom Observation

School ___________________________ Classroom Teacher ___________________________
Observer __________________________ Date __________________________
Start Time _______________ End Time _______________

Describe the classroom setting and activities at time of your observation:

Note any specific strategies/words the teacher uses to encourage good listening.

Generally, describe students’ listening behavior.

Note specific examples of good/poor listening that can be observed.

List 3-4 students who seem to be particularly attentive and/or responsive.

List 3-4 students who seem to be particularly inattentive or disruptive.

Use back to keep running records of dialogue, behaviors, etc. that seem conducive to setting the scene or communicating the nature of the class’s listening behaviors.
APPENDIX R

SUMMARY OF WEEKLY ACTIVITIES
PERFORMED BY RESEARCH ASSISTANTS

257
### Time line for Research Activities

<table>
<thead>
<tr>
<th>Date</th>
<th>Activities</th>
</tr>
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<tbody>
<tr>
<td>Aug. 15th</td>
<td>Training session all day: Introduction to study, overview, discussion of ethics/confidentiality, distribution of materials.</td>
</tr>
<tr>
<td></td>
<td>First weeks of school—contact teachers and principals for consent.</td>
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<tr>
<td>Week of Sept. 10</td>
<td>Arrange observations in each class during read-aloud time; talk to students about the study and pass out consent forms (explain/show incentive); select 4-5 potential students per school to interview; collect class lists, randomly assign to treatment groups, code students, and begin gathering student demographics; begin working on class visitation schedule.</td>
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<tr>
<td>Week of Sept. 17</td>
<td>Team meeting to finalize student interviewees, check coding and demographic charts, check schedules for “time of day” assignments, review next week’s activities.</td>
</tr>
<tr>
<td>Mon. or Tues.</td>
<td>Collect returned consent forms, give out incentives, encourage others to get them in by Wed. Pass out round two interview consent forms to 2 selected students in each building. Try to contact parents, if possible, to get consent forms in by Friday. Fri. Collect consent forms from rounds 1 and 2; begin first interviews if ready.</td>
</tr>
<tr>
<td>Week of Sept. 24</td>
<td>Begin regular bi-weekly visits to classrooms during scheduled times. First session: Administer quantitative pretest (includes training on use of bar graph recording sheets) and qualitative pretest. Administer qualitative pretest (open-ended questionnaire) to all students. Second session: Read pretest story, The Snow Parlor. Show sample questions and answers on over head (if possible). Students record number they think they could answer correctly, their self-efficacy score, on pretest graph. Team Meeting: Discuss any questions, concerns, check inter-rater reliability on student recording sheets.</td>
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<tr>
<td>Week of Oct. 1</td>
<td>First session: Talk about goal setting in two goal groups. Build on background knowledge of goals that students share. Pass out student booklets according to treatment group. Blue—student-set goals—students will set own goal for story #1; green—teacher-set goals—will record a goal of 6; yellow—control—do not pass booklets out until after the story is read. Read The Little Old Woman Who Used Her Head. Read questions orally and have students answer, then self-check according to printed instructions. All students will record correct number of answers on Story #1 graph. In goal groups, lead short discussion on how students’ goals affected their performance. Note any particularly salient comments. Second session: Lead discussion on good listening skills. Show poster of behavioral listening skills. Then introduce “Strategies for Good Listeners—Using Your Head” chart. Read through strategies, discuss what they mean. Pass out booklets and record goals as before. Close books, read Story #2 and repeat as with session one. During this week, complete first round interviews with 2 selected students if necessary.</td>
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**Time line for Research Activities**

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<th>Week of Oct. 8—</th>
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<tr>
<td><strong>First and second sessions:</strong> Repeat above with stories #3 and #4. Review listening strategies prior to each story. Discuss any strategies students used following self-scoring. Also discuss goal setting and its impact and write down any comments made by children. May begin interviews with teachers of the two selected students.</td>
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<th>Week of Oct. 15—</th>
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<tr>
<td><strong>First and second sessions:</strong> Repeat prior week using stories #5 and #6. Conduct phone interviews with parents of two selected students.</td>
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<th>Week of Oct. 22—</th>
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<tr>
<td><strong>First and second sessions:</strong> Repeat prior weeks using stories #7 and #8. Be sure interviews are completed with two teachers and two parents of selected students. Make sure to collect completed booklets.</td>
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<th>Week of Oct. 29—</th>
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<td><strong>First Session:</strong> Administer quantitative posttest and qualitative pretest. Administer qualitative posttest (open-ended questionnaire) to all students. For all classes whose teachers are willing, allow students time to write a retelling of their favorite story on back. Collect next session if necessary (and you’re sure you can get them—may want to have them write on another sheet of paper if leaving them.) <strong>Second session:</strong> Read posttest story, The Cannery Bear. Show sample questions and answers on overhead (if possible). Students record number they think they could answer correctly, their self-efficacy score, on posttest graph. Review listening strategies, goal setting strategies, thank teacher and class. During this week, conduct second interviews with two selected students.</td>
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**Team Meeting:** Collect all materials, debrief, receive stipend.
APPENDIX S

MATRICES OF STUDENT OBSERVATIONAL LISTENING AND ACTIVE LISTENING RESPONSES BY SCHOOL

260
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Numbers of students who listed observational or active listening strategies at pretest and posttest.
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Numbers of students who listed observational or active listening strategies at pretest and posttest.
APPENDIX T

MATRICES OF STUDENT 'YES' AND 'NO' RESPONSES IN ANSWER TO THE QUESTION 'ARE YOU A BETTER LISTENER NOW?' BY SCHOOL
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Number of students responding "Yes" and "No" to the question "Do you think you are a better listener now than you were when we started the stories?"
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Number of students responding “Yes” and “No” to the question “Do you think you are a better listener now than you were when we started the stories?”
| Condition          | Males | | | | | | Females | | | | Total |
|-------------------|-------|---|---|---|---|---|---|-------|---|---|---|------|
|                   | High  | Medium | Low | High | Medium | Low | Total |
| **Student-Set Goals** |       |       |     |       |       |     |       |
| Yes               | 2     | 4      | 2   | 2     | 5      | 3   | 18    |
| No                | 1     | 1      | 0   | 0     | 1      | 0   | 3     |
| **Teacher-Set Goals** |       |       |     |       |       |     |       |
| Yes               | 2     | 6      | 4   | 2     | 5      | 3   | 22    |
| No                | 1     | 0      | 1   | 0     | 1      | 0   | 3     |
| **No Goals**      |       |       |     |       |       |     |       |
| Yes               | 3     | 7      | 1   | 2     | 4      | 1   | 18    |
| No                | 0     | 0      | 0   | 0     | 1      | 0   | 1     |
| **Total**         |       |       |     |       |       |     |       |
| Yes               | 7     | 17     | 7   | 6     | 14     | 7   | 58    |
| No                | 2     | 1      | 1   | 0     | 3      | 0   | 7     |

Number of students responding "Yes" and "No" to the question "Do you think you are a better listener now than you were when we started the stories?"
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Number of students responding "Yes" and "No" to the question "Do you think you are a better listener now than you were when we started the stories?"
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Number of students responding "Yes" and "No" to the question "Do you think you are a better listener now than you were when we started the stories?"
LIST OF REFERENCES


278


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