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The Effect of a Remedial Reading Program on the Self-Concepts of Disadvantaged Primary Grade Students

Steve Macuk
Loyola University Chicago

THE EFFECT OF A REMEDIAL READING PROGRAM ON THE SELF-CONCEPTS OF DISADVANTAGED PRIMARY GRADE STUDENTS

by

Steven A. Macuk

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VITA

The author, Steven Anthony Macuk, is the son on David Anthony Macuk and Ute Maria (Ilg) Macuk. He was born on October 30, 1960 in Karachi, Pakistan.

His secondary education began at the Overseas School of Rome, and was completed at Walt Whitman High School in Bethesda, Maryland, where he graduated in 1978.

He received the degree of Bachelor of Arts, Phi Beta Kappa, from the University of Maryland at College Park in December, 1982 with a major in Urban Studies.

After teaching for two years at the Nativity Mission School in New York City, he entered the doctoral program in clinical psychology at Loyola University of Chicago in August, 1985. In addition to the academic curricula, he has thus far completed two clinical training placements in Chicago, one at Cook County Hospital, the other with Associates in Adolescent Psychiatry, and has begun a third at the Institute for Juvenile Research.

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CHAPTER I

INTRODUCTION

In the world of child development, positive self-concept and reading proficiency are not strangers. Many argue that these qualities play critical roles in a child's adaptive growth: positive self-concept promotes psychological well-being, and reading achievement anchors educational competence (e.g., Joseph, 1979; Silvernail, 1981; Wechsler, 1974; Wirth, 1977). Theory and research exploring the possible relationship between these qualities have further linked them. One can guess at such a relationship from personal experience; for example, feeling good about yourself after doing something well. Theories relating self-concept and achievement in reading actually follow one of three ideas: reading achievement improves self-concept, increased self-concept prompts greater gains in reading achievement, or both qualities occur in a complementary cycle that gives each side equal weight. Despite their drawing different causal distinctions, these theories share the central idea that reading and self-concept intertwine in boosting a child's adaptive growth.

This study picks up on the latter idea. Our main purpose is to explore the potential relationship between a remedial reading program and self-concept enhancement in program participants and their control group peers. All these children are early grade school students already behind in reading ability. It is hypothesized that program participants will improve their basic reading skills beyond what would be expected in following the normal school curriculum (as represented by the control group). Furthermore, it is proposed that the acquisition of basic reading skills where little or none existed before is accompanied by an increase in self-concept. As will be elaborated in Chapter II and explicated by further hypotheses, our study focuses on the proposed enhancement of self-concept together with reading skills gain. On one level, then, this work might help to empirically validate a relationship between reading achievement and self-concept. On a more applied level, it highlights how a remedial reading program might act as an effective prevention measure; that is, boosting both the reading achievement and self-concept of participants may act to insulate them from developmental problems associated with deficits in these qualities (Johnson & Sum, 1987; Masten & Garmezy, 1985; Werner & Smith, 1979).

Teaching basic reading skills, when viewed as a preventative effort, adds another dimension to the value of an effective remedial reading program. Not only might such a program promote self-concept and reading strength, but in doing so could deter errant development. Indeed, as will be suggested in the literature review to follow, these potential benefits of reading programs makes their implementation and study essential.

CHAPTER II

REVIEW OF RELEVANT LITERATURE

Terminology

A brief word on terminology introduces this review. Problematic in much of psychological literature is the lack of precise construct definition. Unfortunately, this criticism applies to the term "self-concept." While the more easily operationalized "reading achievement" (used synonymously with reading skill, ability, etc. in this paper) avoids this problem, self-concept has been used inter-changeably with terms as diverse as self-image, self-satisfaction, self-esteem, self-identity, and more (Baskin & Hess, 1980; Joseph, 1979).

Rather than wade through the history and linkage of these separate terms, this study relies on the comprehensive review work of Hall and Lindsey (1970). As noted by Joseph (1979), these authors found that a principal way modern psychology uses self-concept is in reference to a person's feelings and attitudes about himself. Joseph adds that the latter definition is what

most self-concept instruments emphasize. In consequence, our study uses self-concept to mean children's attitudes and feelings about themselves. These attitudes and feelings will be examined across four dimensions, namely self-concept in reading (Reading Self-Concept), math (Math Self-Concept), school (Student Self-Concept), and in general (Global Self-Concept). As will be seen, these dimensions allow for a hypothesis concerning changes in self-concept that vary with each dimension.

Self-Concept Development

The preceding definition and dimensions, and this study as a whole, suggest that self-concept can be improved by reading gains, and improved across various dimensions (i.e., Reading Self-Concept, Student Self-Concept, etc.). A summary of self-concept development supports both ideas.

As Staines (1958) noted, self-concept is a learned structure influenced largely by a child's interactions with significant others in her home, school, and other social groups (see also Fennimore,1968; Quandt & Selznick, 1984; Wirth, 1977). The process begins at birth as children interact with their environment. The first few years of life are critical to self-concept development, with parental care playing a huge role

(Silvernail, 1981). Core self-perceptions (closer to our essence of self) develop at this time, with less central dimensions of self-concept (e.g., self-concept as a golfer) occurring later (Shavelson, Hubner, & Stanton, 1976). Consequently, a good amount of self-concept formation and stability is achieved before the child even enters school (Joseph, 1979). In fact, a problem for a child entering school with poor self-concepts is the resiliency of these self-concepts. Once self-concepts have been formed, children typically behave in a way that engenders outside interaction consistent with their self-image (Combs & Syngg, 1959; Rogers, 1951). A child who views herself as a poor speller, for example, might not prepare adequately for a spelling test or might attribute a high vocabulary test score to luck.

So far, we have a picture of self-concept that, while multidimensional, is "embedded early...and resistant to change" (Silvernail, 1981, p. 29). Nonetheless, this does not mean that after a certain point self-concept becomes irreversibly constant. The very idea of self-concept dimensions elaborated with time argues against total constancy. Additionally, experiences running counter to self-concept expectations

may be strong enough to modify original attitudes and feelings, especially with younger individuals (Joseph, 1979; Silvernail, 1981; Wirth, 1977). Citing results from psychotherapy studies, Joseph (1979, p. 2) concludes that self-concept "...seems to maintain some level of malleability at all age levels."

I opened this paper by stating that positive self-concept and reading achievement promote a child's adaptive growth. The literature bears this statement out, as well as the prevention aspect also noted earlier. Our review will address first the value of positive self-concept.

Why Positive Self-Concept?

Joseph (1979, p. 6), in a review of the self-concept literature, noted that positive self-concept typically leads to "feelings of confidence, self-respect, self-acceptance, and pride", whereas negative self-concept may result in "high levels of anxiety, and feelings of inferiority, depression, timidity, and self-hatred" (p. 6). While Joseph cautions that the relationship between self-concept and school achievement remains unclear in its complexity, the qualities associated with positive and negative self-concept distinguish between adaptive functioning and incapacitation.

In reference to incapacitation, Masten and Garmezy (1985) note that three categories of protective factors consistently appear in research on children's resistance to mental health problems. One of these categories includes positive self-concept; the more it is present, the less likely is later maladaptive development.

These ideas are familiar to school personnel. Results from a recent survey of teachers and school administrators agreed with the school maxim to "Educate the whole child" (Silvernail, 1981). Specifically, these educators agreed that development of students' positive self-concept remains a highly important goal of the classroom. Silvernail (1981) adds that it behooves educators to "identify strategies for developing and enhancing the self-concepts of our students" (p. 8). Quandt and Selznick (1984) echo this theme, noting that self-concept is one of the most important influences of learning. Extending this idea to reading, they add that emphasis should be placed on helping poor readers improve their self-concept as readers.

In short, the assertion that positive self-concept ties to adaptive functioning, particularly for children in school, has little criticism. The literature today

appears to agree with self-concept and school achievement research of recent decades, as summarized by Purkey (1970, p. 14):

> For generations, wise teachers have sensed the significant and positive relationships between a student's concept of himself and his performance in school.

They believed that the students who feel good about themselves and their abilities are the ones who are most likely to succeed. Affirming the counterpart of this point, research reviewed by Masten and Garmezy (1985) suggests that those students who feel good about themselves may be less likely to fail.

Why Reading Achievement?

As the critical variable of this study in addition to self-concept, reading achievement also deserves explanation. With the generic "school achievement" encompassing several subjects, why focus on reading in particular?

The answer begins at a basic survival level. The children in this study, similar to many inner-city, low socio-economic status (SES) students, lag at least one or two years behind the norm in reading skills. Sobering and diverse evidence of life risks associated

with this pattern make the importance of reading achievement for these children self-evident.

Werner and Smith's (1979) epidemiological study, based on a cohort of children followed for over twenty years, showed that competence in reading and writing standard English was one factor in lowering the risk of serious mental health problems (e.g., paranoid, schizophrenic, or obsessive-compulsive behaviors). Interestingly, a related health factor was the children's faith in the effectiveness of their own actions, an idea that hints at elements of self-concept. More recently, a Children's Defense Fund report noted that high school dropouts with strong basic skills in reading and math have over twice the average earnings of dropouts with weak basic skills (Johnson & Sum, 1987). The same pattern held for high school graduates. As the report notes, "one in three American youth have basic academic skills so weak they would not be accepted for enlistment in the military" (Johnson & Sum, 1987, p.8). Those 18 through 23 year olds with the weakest reading and math skills (the bottom fifth nationally) are:

> Eight times more likely to have children out of wedlock than those with better skills; Nine times more likely to drop out of school before graduation;

> Five times more likely to be out of work and out of school; Four times more likely to be forced to turn to public assistance for basic income and support. (Johnson & Sum, 1987, p. 9)

The situation is even more grim for poor and minority children due to their disproportionate representation in inferior schools. On virtually every standardized test of basic skills, minority teens consistently score in the bottom fifth of their peers (Johnson & Sum, 1987). This translates into an average black 17 year old reading at the level of an average white 13 year old (Johnson & Sum, 1987). One would project, based on current rates of gain, that blacks would not achieve parity with whites on college admission test scores for 45 years (Baker, Michael, & Cohn, 1987).

The preceding statistics make plain why effective reading instruction is all important for post-school success. Its importance for in-school success is equally clear. As Wirth (1977, p. 34) puts it, "Reading is the foundation for achievement in many other areas...children who experience failure in reading inevitably experience difficulty in other academic areas." It is small wonder that over two decades ago

Janowitz (1964) claimed that for children in the early grades, failure in reading is the most decisive criterion for determining who will be labeled a failure in school. Bettelheim and Zelan (1981, p. 25) affirm the crucial role of reading in overall academic success, as well as provide an introduction to the literature relating self-concept and reading:

> A child's attitude toward reading is of such importance that, more often than not, it determines his scholastic fate. Moreover, his experiences in learning to read may decide how he will feel about learning in general, and even about himself as a person.

In short, with both positive self-concept and reading achievement established as worthy goals, our focus turns to the connections between them.

Reading Achievement and Self-Concept

Just how related are self-concept and reading? As I indicated earlier, the disagreement seems not over whether the two intertwine, but just how they do (Which comes first? Does improvement in reading mean improvement in self-concept? Which self-concept dimension is involved?). Answering those questions empirically is all the more appropriate given a preponderance of

correlational work done in this area.

Wattenberg and Clifford (1964), citing the correlational research of Barber (1952), Bodwin (1959), Coopersmith (1959), Lumpkin (1959) and others, show that evidence has existed for some time that reading achievement positively correlates with self-concept. Working with kindergartners in two Detroit schools, Wattenberg and Clifford added to this evidence. They found that early variance in self-concept strength among students was reflected by similarly patterned variance in reading levels two and a half years later (with high reading linked to strong self-concept). Hake's (1969) literature review, dating back to 1936, also concluded that emotional problems accompany poor readers.

Hake (1969) found this pattern in his own study. He divided sixth grade students into groups of below and above average readers based on reading achievement scores. A projective picture story measure, the Reading Apperception Test, was used to draw self-concept and other themes from the children. Hake noted significant differences in self-concept themes between good and poor readers, with the good readers again showing higher self-concepts. Similar results came from Andrew's (1971) study of self-concept in good and poor readers.

Using fifth to eighth grade students, Andrews formed groups differing in reading level and gave each subject the Primary Self Concept Test (a self-report measure based on self-referent adjectives and phrases). Results showed that poorer readers tended to lack feelings of confidence and personal adequacy.

The persistent, positive correlation between self-concept and reading achievement has, in short, lasted through years of study. More recent reviews in this area, such as those by Quandt and Selznick (1984), Schlesinger (1982), and Silvernail (1981), continue to find this pattern.

Hypotheses two and three are introduced now to clarify the proposed relationship between reading achievement and self-concept in this study. Our first hypothesis essentially held that the reading program fosters reading improvement for its members relative to the control group. Hypothesis two states that program participants improve their reading, student, and global self-concepts beyond that of the control group. The link between these hypotheses returns to the initial proposal that self-concept gains accompany reading improvement, and finds support in the welter of correlational data mentioned above. Only the mathematics

dimension of self-concept is not predicted to increase with reading gain. This is based on the assumption that math and reading self-concepts have, as with their respective subject areas, little relation to each other. By predicting that reading gain has no effect on math self-concept in this and subsequent hypotheses, we attempt to provide discriminant evidence of reading gain's specific self-concept effects. This issue is further addressed by a second component of hypothesis three.

Our third hypothesis goes beyond inter-group comparison, positing that all subjects who show the most improvement in reading significantly raise their reading, student, and global self-concepts relative to those subjects who show the least improvement in reading. Thus, the study's most improved readers will be combined to highlight the effect of their outstanding shared quality--reading improvement. By comparing all the most and least improved readers, we hope to isolate the effect of reading gain from the confounding effects of group membership.

The group membership confound primarily involves the tutor-tutee relationship's possible impact on self-concept. Wirth (1977) has noted that a teacher's

ability to establish rapport with a disadvantaged student is a basic step toward improving the child's self-concept. It is unlikely that the relationship between tutors and their students has no effect on the children's self-concepts. In consequence, a second component of hypothesis three helps to further isolate the effect of reading improvement. Stemming as much from intuition as from research described below, this adjunct hypothesis assumes that the less a dimension of self-concept has in common with reading, the less it will be affected by reading achievement. Specifically, it is hypothesized that reading achievement positively affects the following dimensions of self-concept in increasing strength: Math, Global, Student, and Reading. In other words, it is hypothesized that the most improved readers do not significantly differ from least improved readers in math self-concept improvement, but show increasingly significant gains over least improved readers from global to student to reading self-concept. The end positions of math and reading self-concept on this continuum make sense; each belongs to opposite sides of the verbal-nonverbal skills dichotomy, and the reading program only aims to boost reading (i.e., verbal) skills. The order of student and global

self-concept is more arbitrary. Ultimately, however, we would expect more student self-concept gain as academic competence more obviously relates to reading ability.

Before going on, it is important to understand the theoretical context of hypothesis three. This begins with a look at alternative models of reading achievement's relationship to self-concept.

Relationship Models

Hypothesis three receives tentative support from researchers interested in the causal direction of the reading and self-concept relationship. As stated earlier, such research has given equivocal results in that explanatory models offer three separate views: reading achievement improves self-concept (skills model), increased self-concept promotes greater gains in reading (self model), or that reading achievement and self-concept gain occur in a complementary cycle (psychoeducational model).[1]

The skills and psychoeducational models, more related to our third hypothesis, will receive further

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[1]While the psychoeducational model is a term currently seen in the literature (e.g., in Knoff, 1986), "skills model" and "self model" were created by the author to facilitate reference to the theories each term represents.

review here. Readers interested in research on the self model should review Callison (1974), Wattenberg and Clifford (1964), Wirth (1977), and the analysis by Quandt and Selznick (1984). At its most basic, the self model posits that little academic gain, including in reading, is likely for students who enter school with such low self-concepts that they expect and conform to a "failure" image they have of themselves. Reading skill advocates counter that it is through slow but sure success in reading that this damaged self-concept can be rebuilt.

The debate between the self-concept and skill advocates, with both sides claiming more relevancy, appears to support the psychoeducational model by default. Knoff (1986) indicates that the latter model agrees with the first two, but sees the question of which came first as irrelevant. Instead, the focus is on their circular causality. As Knoff (1986) states:

> ...it is likely that a child's negative self-concept can affect school learning and success and just as likely that academic failure can initiate the negative self-concept feelings. The psychoeducational model accepts the presence of the disturbed

> behavior regardless of its 'chicken or egg' origination.... (p. 14)

From its middle ground position, the psychoeducational view nicely integrates the arguments of the previous directional models. For example, even this study's third hypothesis, implying reliance on the skills model, can be seen as just another cycle in the psychoeducational model.

The remedial reading program in this study is geared to teaching reading skills, not enhancing self-concept. The volunteer tutors who staff the program receive training from program directors in remedial reading instruction only. Success is not sought in nonreading areas first; reading skills remain the primary focus throughout the program's eight months. Group meetings between tutors and the children's parents to explore the growth of self-concept do not take place. The tutors are not formally introduced to special emotional considerations of the children. In brief, the tutors learn how to teach reading at a basic level. Any consideration of self-concept issues by the tutors would result from intuition, not training or program design.

The relevance of this list of what-the-program-isn't stems from tactics behind programs designed to

boost self-concept (Baskin & Hess, 1980; Quandt & Selznick, 1984; Silvernail, 1981; Staines, 1958). Because the program pursues reading instruction alone, it makes more tenable the argument that any self-concept gain upon program completion has less to do with direct strategies of self-concept improvement and more to do with the indirect effect of reading gain (the skills model).

In spite of this logic, a major confound remains in that tutors have a one-on-one relationship with their tutees. As such, this interpersonal bond hinders interpretation of data purely through the skills model. A fourth hypothesis tries to account for such extra-program effects and still leave the skills model intact. It is hypothesized that the program's most improved readers show more reading, student, and global self-concept enhancement than the program's least improved readers despite possible non-reading effects on self-concept (e.g., the tutoring relationship, a halo effect, etc.) from program membership. Presumably these alternative effects would be available to all program children, again leaving reading gain as the distinguishing criterion. In other words, if all program subjects went up in self-concept because of extra-program

effects, the most improved readers'self-concepts should still rate higher from the extra self-concept boost of reading skills gain.

This reasoning does not indicate a rejection of hypothesis three (that most improved readers raise their self-concept relative to least improved readers regardless of group); it simply acknowledges that this program fits the skills model when compared to programs specifically designed for self-concept enhancement, and that we expect to see self-concept gains for those participants whose reading skills improve the most.

Additional support for the skills model, at least without the confound of program membership, might arise from a comparison of improved and non-improved readers in the control group. Assuming that some control subjects will qualify as most improved readers despite program absence, it is hypothesized that their reading, student, and global self-concept improvement will exceed self-concept change in the least improved control readers. Below we review the skills model literature pertaining to the previous hypotheses.

Skills Model Literature

Smith (1968) studied the self-concept effects of three treatment programs on corresponding groups of mid and late primary school boys who were poor readers. One

group received remedial reading instruction, the second participated in teacher-pupil activities (games, drawing, and tape recording) but received no instruction, and the third group simply attended regular classes. Smith tested the children with the Spaulding Self-Concept Inventory before and after the 12 weeks each program ran. Results showed that the remedial reading group made the greatest gains in reading and self-concept over the three month period, although the second group's "treatment" of personal interaction best improved the self-concept scores for the small proportion of children who pretested lowest on self-concept.

In a comprehensive epidemiological study on Britain's Isle of Wight, Rutter, Tizard, and Whitmore (1970) noted further evidence of the impact of reading on self-concept. In this complex survey, it was found that children of average intelligence but with poor reading skills had a much higher rate of conduct disturbance than children with adequate reading skills. The authors reasoned that "children who did not learn to read lost confidence in themselves, failed to maintain normal self-esteem and reacted with antagonism and sometimes delinquency" (Rutter, 1979, p.63). While epidemiological research cannot prove causality, these

Isle of Wight findings and conclusion add credence to the skills model of self-concept development.

Kifer's (1973) cross-sectional study also supported the skills model. The study focused on long-term effects of varying amounts of academic success and failure. Kifer selected students who stayed in the upper and lower fifths of their class (determined by class marks) for grades one and two, one to four, one to six, and one to eight. Thus, those students examined had either two, four, six, or eight years of success or failure. All subjects were given a modified test (Brookover's) of academic self-concept. Kifer's results clearly showed that as the number of successful and unsuccessful school years increases, so does the difference in academic self-concept. Successful students essentially stayed at the same high level of self-concept, whereas the self-concept of students in the lower fifth, which had started almost as high as that of successful students, dropped precipitously with each passing year.

The idea that skill development could boost self-concept received more support in Bloom's (1976) theory of mastery learning. Mastery learning basically holds that all students can achieve high (academic) competence if allowed to achieve at their own rate and if their

instruction is more individually tailored. Bloom felt that as mastery levels are worked through, confidence as a learner increases. Mastery learning thus suggests that self-concept significantly depends on what students perceive of their achievement in school.

Bridgeman and Shipman (1978) affirmed this idea in their longitudinal examination of self-esteem and achievement motivation. The authors administered the Coopersmith Self-Esteem Inventory and the Brown IDS Self-Concept Referents Test to 404 kindergarten children, as well as the Cooperative Primacy Tests to assess achievement. Subjects were retested each year through third grade. Results showed that high self-esteem was common in kindergarten and first grade, though not significantly related to achievement. In contrast, self-concept scores in third grade more strongly related to achievement test scores in reading and math. Bridgeman and Shipman felt these results provided evidence that academic achievement and failure influence self-esteem more than the reverse sequence.

Additional recent investigations of the skills model, particularly reading achievement's effect on academic self-concept, are reviewed by Silvernail (1981). As Silvernail (1981, p. 33) notes, research

findings indeed "...suggest that as we identify more effective ways of improving the academic achievement of our students, we will promote the enhancement of their self-concepts." This suggestion is consistent with the assumptions underlying negative self-image development in children with learning disabilities (Joseph, 1979). It is also consistent with Quandt and Selznick (1984, p. 5), two authors in the self camp, who nonetheless subscribe to Artley's (1977) assertion that giving "consistent, successful, and rewarding reading experiences" is the key to a remedial reading program's successfully reaching children with damaged self-concepts.

Justification Issues

With hypotheses in hand, we have only a few questions left to answer before proceeding to the actual investigation. These questions concern justification of specific components of this study: why primarily second and third graders were examined rather than older (and more reliably assessed) children; why self-report measures of self-concept were used; specifically, why the Joseph Pre-School and Primary Self-Concept Screening Test (Joseph) and the Affective Perception Inventory (API); and simply, given the myriad confounding

variables that complicate field research, why carry out such an experimentally weak investigation in the first place?

Age of Subjects

Subjects in this study include second and third graders, with a few students repeating first grade. As alluded to above, ensuring test reliability with young children, especially on a developmentally unsolidified and psychometrically equivocal construct like self-concept, is a thorny task. Reading test questions incorrectly, poor comprehension of what is asked of them, and shorter attention spans are a few examples of why testing younger children can be problematic. Why indeed are younger subjects the focus of this study? The answer ties to premises underlying reading achievement and self-concept.

Clay (1979, p. 3), speaking on the process or reading, notes that even in the first 12 to 18 months of instruction, an "at risk" reader can be engraining a narrow, handicapping range of reading strategies:

> He may rely on what he can invent from his memory for the text but pay no attention at all to visual details. He may disregard obvious discrepancies between his response and words on the page. He may

> be looking so hard for words he knows and guessing words from first letters that he forgets what the message is about.

Clay adds that letting the child flounder this way (in reading) leads to other problems: consequential deficits in the rest of the curriculum, personality and self-confidence troubles, and long practiced but poor skills that need to be unlearned before the reading gap can be made up.

Clay's analysis echoes that of Janowitz (1964), who wrote on the experience of early grade teachers. These teachers note how even low SES children express a friendly, curious attitude during their beginning school experiences, only to become antagonistic or indifferent as they fail in school. In Janowitz' (1964, p. 11) words, "We are convinced that children have to learn to read early in school because later school success can now be predicted quite accurately by the end of the third grade." Janowitz asserts that not only do children behind in reading typically fail at least one grade, but their self-esteem falls from the level it held before learning to read.

Essentially giving the same reasons as Clay and Janowitz, as well as citing Bloom, Bettelheim and Zelan (1981, p. 26) conclude that "reading instruction during

the first three grades is crucial." This study, in agreement, has focused on early grade schoolers.

Self-Report

Given this focus on younger children, it becomes even more legitimate to question our use of self-report to validly and reliably assess self-concept levels (Silvernail, 1981). The list of critical issues include:

1. The clarity of the subject's awareness.
2. The availability of adequate symbols of experience.
3. The willingness of the subject to cooperate.
4. The individual's feeling of personal adequacy.
5. The individual's feeling of freedom from threat.
6. The social expectancy. (Parker, 1966, p. 692)

A lack of reading skills makes the first two factors especially relevant for young children (Drummond & McIntire, 1977).

Silvernail (1981) acknowledges the latter criticisms of self-report measures, particularly for assessing children's self-concept. Yet he notes that essentially two methods are available for this task: self-report and behavioral observation. Observation is not without criticism, however. A lack of training in

observation may lead to misinterpretation of actions, biases can limit our understanding and judgement, and limited observations may reflect situational determinants more than self-concept (Silvernail, 1981). Quandt and Selznick (1984, p. 7) focus on a special bias in adding that "(observers) are all prone to see what (they) expect to see rather than what is there."

These and more criticisms of behavioral observation, notably when reported by parents and teachers, are enumerated by Beitchman, Raman, Carlson, Clegg, and Kruidenier (1984). On the other hand, these authors stress the importance of self-report measures for children. As they put it, "It is a curious fact that children...remain in a sense disenfranchised, being able to express themselves only second hand through their parents or their teachers" (Beitchman et al., 1984, p. 413). Self-report measures may tap the inner world of the child, and so best reflect the child's mental health (Beitchman et al., 1984). Purkey (1970) speaks of the rich insights into self-concept available through child self-report measures, as does Silvernail (1981) and Joseph (1986).

Silvernail (1981, p. 47) cautions that using self-report measures entails four complication reducing steps:

1. Read the items to very young students.
2. Stress that there are no right or wrong answers.
3. Administer the scale in a nonthreatening manner.
4. Maintain confidentiality of the results.

Between following these steps, the potential effectiveness of self-report, and these measures' ease of administration, this study primarily used self-report to assess subjects' self-concept. A brief global self-concept observational measure filled out by teachers supplemented the children's self-reports.

The relative strength of the Joseph and the Affective Perception Inventory (API), as well as the shortcomings or inadequate nature of other child self-report measures, led to their selection for this study. Individual administration format (to ensure subject engagement), appropriate age range, ease of administration and scoring, and test credibility in the field of self-concept were main criteria for test selection. The age criterion proved the most difficult to meet, negating use of such familiar self-report measures as the Coopersmith Self-Esteem Inventory and the Piers-Harris Children's Self-Concept Scale. Projective measures also ran into difficulty. Aside from generally low reliability and validity figures,

they posed the problems of lengthy and involved administration and scoring procedures (Goodwin & Driscoll, 1980; Knoff, 1986; Mitchell, Jr. 1985).

The Joseph and Self-Perception Inventory (SPI) both received strong reviews in the Ninth Mental Measurements Yearbook (Gerken, 1985; Riggs, 1985; Telzrow, 1985), and seemed to best meet the remaining criteria. Actual inspection of these measures led to dropping the SPI in favor of its more age appropriate equivalent, the API. In summary, the four dimensions of self-concept used in this study (Reading, Student, Global, Math) were measured by children's self-report using API scales. The Joseph was an additional global self-concept self-report measure, and included a separate teacher rating scale of students' global self-concept.

Field Research

Before concluding this introduction, a final question remains to be answered. It is the most basic and the most critical together: Of what use is it to carry out quasi-experimental field research given the many confounding variables that threaten such work? Is it simply worth the effort? While there are no easy answers to this question and the issues it poses, a

strong case for this study and similar efforts stands on grounds of reality and necessity.

Reality concerns the issue of psychometrically "tight" research in field studies. Cowen (1978) eloquently addresses this point:

> Communities are many things. One thing they are not is an ideal laboratory for antiseptic psychological studies. Their extraordinary complexity, omnipresent flux, action-service orientation, and susceptibility to day-to-day pressures present real and formidable barriers to "Mr. Clean" program evaluation studies. These factors place major constraints on the design of studies, the types of criteria that can be used, and the rigor of sophistication of the control that can be exercised. Although some of these problems can be reduced through judicious planning, others, quite beyond the experimenter's control, cannot....Weaknesses in specific measures or in classes of criteria typically used in community program outcome research dictate that greater emphasis be placed on converging sources of evidence. But we must still expect that community realities will remain to militate against ideal research studies. The vulnerability

> of findings from any single community evaluation study points to the importance both of replication and of tolerance for a slow accretive process, in which small pieces in a puzzle gradually cumulate toward weight-of-evidence conclusions about major new programming approaches. (pp. 803-804)

Cowen not only affirms how experimental rigor must acknowledge the realities of study constraints "in the field," but his last point on new programs brings up the factor of necessity.

One only has to review the literature and its highlights in this chapter to realize the necessity of bolstering children's reading skills and self-concept. Success in America is predicated on a through grounding in the Three R's; adequate self-concept is critical to a child's healthy psychological development. It is clear that research needs to focus on effective, encompassing ways of promoting these qualities.

Hypotheses

1. Program participants significantly improve their reading skill beyond what would be expected in following the normal school curriculum; that is, beyond the improvement of the control group.

2. Program participants significantly improve on

Reading, Student, and Global self-concept measures beyond the improvement of the control group.

3. a) In accord with the skills model, subjects who show the most improvement in reading significantly raise their Reading, Student, and Global self-concept scores relative to those subjects who show the least improvement in reading.

b) The comparison of self-concept improvement between the study's most and least improved readers follows a pattern: the less a dimension of self-concept has in common with reading, the less it is affected by reading improvement. Specifically, gains in reading skill enhance the following dimensions of self-concept in increasing strength: Math, Global, Student, Reading. In consequence, the most improved readers do not significantly differ from the least improved readers in Math self-concept, but show increasingly significant gains over the least improved readers from Global to Student to Reading self-concept.

4. Despite possible Program influences on all its members' self-concepts beyond the effect of reading gain, the Program's most improved readers still show significantly more Reading, Student, and Global self-concept enhancement than the Program's least improved readers.

5. The control group's most improved readers show significantly more Reading, Student, and Global self-concept enhancement than the control group's least improved readers.

CHAPTER III

METHOD

Subjects

Children in the subject pool came from a public school in a low socioeconomic area of Chicago. They included a number of different racial and ethnic groups, though black children predominated. Students entered the final subject group if their pretested reading achievement level was low enough (typically one to two years behind grade level) to qualify for entry into the remedial reading program. Of this group, boys outnumbered girls by a little less than two to one. Twenty-eight second and third grade students comprised the bulk of subjects. Six repeat first graders were added to make a total of 34 subjects. Ages ranged from seven to nine years, with seven years, eleven months the average age at pretesting. Of the 34 subjects, 18 were placed in the Reading Tutoring Program of this study. These students made up our experimental group. The remaining 16 subjects formed the control group. The experimental (Program) group total dropped to 17 early in the study; a subject had to be withdrawn from the

study because of persistently missing tutoring sessions. The final subject total was 33.

Setting

The Reading Tutoring Program is located in the same neighborhood as the children's school. The Program runs from mid-October to the following May, with two one-hour sessions per child each week. Tutors utilize a method of reading instruction known as LEA--the language-experience approach.

LEA begins by helping stimulate a child's interest in a story's meaning. There is a deemphasis on phonics, alphabet recitation, and other rote learning. Children are encouraged to dictate their own stories. With very beginning readers, children might first draw a story picture and give it a caption to help show how speech is related to print (Morris, 1988). These experience-based stories serve as reading material for the children. The personal meaning thus imparted to each story helps to turn reading mastery into a stimulating task. Gradually children are assisted in learning to read the words forming their own stories, and later, the words of trade (library) books and basal readers. The basal readers come from the Ginn Reading Program series published by Ginn & Company, the Bookmark Reading Program texts of Harcourt Brace Jovanovich, and other

standard, graded-in-difficulty reading series. For more information on the LEA method, refer to Russell Stauffer's (1970) Language-Experience Approach to the Teaching of Reading.

The Reading Program does incorporate a phonics component into instruction. Children learn about vowel patterns by sorting into columns individual words exhibiting different high frequency consonant (C) and vowel (V) groupings (e.g., hit-CVC, want-CVCC, look-CVVC). Phonics instruction does not appear, however, until children have worked and become familiar with language units larger than the letter combinations of phonics. As Morris (1988, pp. 42-43) notes, this is consistent with the LEA philosophy that:

> larger language structures (dictated stories, poems, even caption sentences) are more concrete, meaningful and accessible to the neophyte reader than are smaller structures such as function words (and, on, the) and letter-sound relationships (/b/ = b, /a/ = a). Furthermore, by working in a top-down manner--from story to sentence to word to letter-sound relationship--the child has the opportunity to see how the smaller, more abstract (i.e., divorced from meaning) units, such as words and their letter-sound components, actually fit into

a meaningful whole.

The Program operates with volunteer tutors under the direction of reading specialists from the National College of Education. The tutors include college undergraduates, housewives, Masters level students in training to be teachers or reading specialists, senior citizens--generally anyone interested, literate, and willing to commit to tutoring twice a week for a school year. As mentioned earlier, tutors are trained in remedial reading instruction only. In keeping with the LEA method, they are trained to take dictation from their tutees, guide the reading of dictated stories, simultaneously read aloud with their tutees from basals and trade books (choral reading), alternate reading passages aloud with tutees (support reading), and implement one-hour lessons (Morris, Tschannen-Moran, & Weidemann, 1981).

Two Masters level reading specialists assisted the tutors every session. The specialists developed lesson plans for each child's session, noting which words to sort, what books to read, etc. The tutors became more proficient at lesson implementation as the year progressed, but planning was not their responsibility. Tutors could confer with the specialists whenever they had difficulty or a question about the day's lesson.

Typical Program lessons varied with the reading level of the child. A beginning lesson for the novice reader might include the following six steps (Morris, 1988):

1) Having the child draw a picture, tell the tutor about it, and provide a sentence caption (which the tutor writes) for the picture. The tutor finger-point reads the sentence, and encourages the child to subsequently do the same.

2) The child dictates four sentences for an "I can ..." book (e.g., "I can play checkers"). Again this is followed by the tutor and tutee alternately finger-point reading the sentences.

3) The child plays instructional games with the letters of the his name.

4) Echo-read a Pre-Primer level story (e.g., "The Bus Ride": A girl got on the bus. Then the bus went fast. A boy got on the bus. Then the bus went fast. A fox got on the bus. Then...). The tutor reads the story for the child, returns to page one and finger-point reads it, then has the child finger-point read it, and continues through the story page by page.

5) The child memorizes a four-line verse.

6) The tutor reads to the child (e.g., Rumpelstiltskin).

These steps correspond to a very beginning reader's level. The tasks become more complex as familiarity and skill grow, although they remain brief (8-12 minutes each) to keep the child engaged and actively involved in the lesson (Morris, 1988).

Materials

Four separate assessment measures were ultimately utilized, two for reading and two for self-concept. Reading proficiency was assessed by Contextual Reading (pre- and post-test) and Flash Word Recognition (post-test) scores. Contextual reading involved subjects reading 100 word passages from classroom basal readers. The passages ranged in difficulty from early to middle to late first, second, and third grade levels. A Contextual Reading score corresponded to the highest difficulty level a child reached while reading at a 90% accuracy level. Flash Word Recognition refers to a child's ability to identify isolated words taken from the National College Reading Center Word Recognition Inventory. The words are shown to subjects for one fourth of a second each, and are also difficulty graded by early, middle, and late levels for grades one to three.

The self-concept measures were the Joseph PreSchool and Primary Self-Concept Screening Test

(Joseph) and the Affective Perception Inventory (API), Primary Level. Standard instructions accompanying each measure were used during administration. The Joseph is a 15 item test with two parts. In the first, the child is asked to draw her face on a same-gender figure outline. This is intended to focus the child on herself while providing a warm-up exercise. Following this, the child answers 15 self-referent questions. Thirteen of these are accompanied by pairs of pictures from which the child selects the one she identifies with more closely (see Appendix A). The pictures are designed to facilitate question comprehension. The two remaining questions are simple enough to respond to without the aid of pictures. The Joseph has a separate rating scale of the child's self-concept to be filled out by an observer (e.g., teacher). Both the Joseph questions and rating scale are designed to tap global self-concept.

A test-retest reliability coefficient of .87 was listed in the Joseph instruction manual (Joseph, 1979). It came from a sample of 18 children (median age of 4-10) tested four weeks apart. As Joseph (1979) notes, however, the malleable nature of self-concept limits the utility of test-retest reliability figures. Internal consistency was assessed with the Kuder-Richardson (20) formula, yielding a median interitem correlation of .79.

As for validity figures, the Joseph manual focused on construct and criterion-related evidence. Construct validity concerns evidence of a test's capacity to measure the trait it claims to measure. Joseph (1979) claims construct validation for his test through the correlation of Joseph global self-concept scores with two teacher-completed self-concept rating scales (the Inferred Self-Concept Judgement Scale and a modified version of the Behavior Rating Form). Working with heterogeneous samples with respect to race and socio-economic status, correlation coefficients were found ranging from .28 ($p<.05$) to .65 ($p<.001$). Joseph (1979, p. 57) asserts that because reliability analysis supported the self-concept predictive capacity of the 15 items, it further established construct validity by helping "to insure that the psychological variables being measured are more uniform for all items."

Criterion-related validity is supported by the correlation of test scores with performance on a concurrent external criterion. Joseph (1979) proposed that his measure may be used as a predictor of present academic success. Again using heterogeneous samples, he correlated self-concept scores to Slossen Intelligence Test IQs ($r=.66$, $p<.001$), Preschool Language Scale IQs ($r=.63$, $p<.001$), and to scores from the Developmental

Test of Visual-Motor Integration (r=.69, p<.001) (Joseph, 1979, p. 58). Negative correlations occurred with homogeneous samples of relatively affluent children; it appeared that for many of these children the highest achievers had the poorest self-concepts.

The Affective Perception Inventory, Primary Level (grades one to three) consists of paired self-referent statements a child chooses between. No pictures accompany these statements. Of the ten self-concept scales the API offers, four were used, each designed to assess a different type of self-concept: global, student, math, and reading (see Appendix B). The test may be self-administered, but was completed in this study with the aid of an examiner to ensure item comprehension. Test-retest reliability (7-8 weeks) is given as approximately .90 (Soares & Soares, 1985). Reliability coefficients on internal consistency range from .40 to .88 (Soares & Soares, 1980). These figures were taken from all the Primary Level API scales except the Reading Self-Concept scale; its development followed publication of reliability and validity analyses for the other nine scales. Discriminant validity is suggested by low to moderate interscale correlations (heterotrait-heteromethod) of .02 to .52 with a median of .34 (Soares & Soares, 1980, p.26). General patterns

included that School and Global Self-Concepts clustered frequently and diverged from Math Self-Concept. These patterns, however, were noted for grade levels one through twelve together; separate analysis results for the Primary Level API (grades 1-3) were not specified (Soares & Soares, 1980).

Procedure

Teachers from the school's second and third grades, as well as the two first grade teachers who had repeat students, were asked to list students in their classes who they thought had reading difficulties. Each student selected was given two parent permission forms. One form sought approval to test the child's reading level for entry into the Reading Tutoring Program and again at the end of the school year. The other form asked permission to pre- and post-test the child's self-concept levels for a research project. Reading and self-concept testing followed the return of these completed forms.

Reading assessment was performed first, and identified the 34 students originally in the study. Students were individually tested on the Contextual Reading measure by trained examiners. Testing took place in the third week of the school year, and lasted for two weeks. Each child's testing took approximately

20 to 30 minutes. Following testing, the 34 lowest scoring students were separated into experimental and control groups. Because the students came from three grades and six different classrooms and teachers, efforts were made to match these variables between experimental and control groups. Separate sets of students were formed by grade and teacher. Half of each group was randomly assigned to the control group, the other half to the experimental group.

The number of children in the experimental and control groups were 17 and 16, respectively. Black children made up over 60% of subjects in both groups, with the remaining children presenting a mix of racial and ethnic backgrounds. The average age of children in either group was 7 years, 11 months at pretesting. Gender ratios were equivalent, with an 10:7 boy to girl ratio in the experimental group, and an 11:5 ratio in the control group. Subjects in the Program yielded an average Contextual Reading (the reading achievement pretest measure) score of 3.6 (standard deviation = 3.4), while the control group mean was 3.0 (standard deviation = 3.0). These means were not significantly different ($p<.57$, two-tailed), and suggested that the reading levels of children in each group were equivalent. The Reading Tutoring Program began

immediately after these groups were formed.

Self-concept testing started within one week of reading assessment. Testers volunteered from a graduate program in clinical psychology and had no knowledge of whether subjects were in the Program or control groups. Subjects were individually administered the Joseph test, then the API. Administration of both tests followed the standard procedure of their respective manuals. During the Joseph, a child first was asked to draw a picture of her face on blank figure. The examiner clipped the drawing in an upright position facing the child, at the same time saying that this picture would help remind the child of who she and the examiner would be talking about. Children were assured that there were no right or wrong answers, only the answers that fit them best. The examiner then posed two self-referent statements, each accompanied by an explanatory picture, and checked that the statements and pictures had been comprehended. The child was then asked which statement/picture was more like her. After the response was confirmed by the child, the examiner proceeded to the next pair of statements. Fifteen pairs of statements were asked in total, with all but two aided by matching pictures.

In contrast to the Joseph, each version of the API

Primary Level (one scale for each of several self-concept dimensions) was completed without pictures. The examiner simply read two contrasting self-referent statements to the child off a shared sheet of such statements. The child circled his choice of the pair, and the next two statements were read. This format was followed on the four API scales used, each one beginning with a pair of practice statements. Again reassurance was given that there were no correct answers. Children took 25 to 30 minutes total to complete both the Joseph and API tests in one sitting. Self-concept testing was completed for all subjects within two weeks of the last reading pre-test.

The Reading Tutoring Program, begun immediately after the Program group was assigned, continued from mid-October through the following May. Program children received one-hour tutoring sessions twice a week. The same reading and self-concept assessment procedure was repeated for post-testing in the latter part of May through early June, although this time including Flash Word Recognition during reading assessment. All self-concept examiners remained blind to which children were in the experimental and control groups.

CHAPTER IV

RESULTS

The hypotheses of the present study were tested by three main methods of analysis. They were tested by comparison between the study's Reading Program and Control groups, within the two groups, and by comparison of the combined groups. The latter two comparisons required separating subjects into categories of most and least improved readers. Both categorical and correlational analyses were applied to the data.

Table 1 summarizes reading and self-concept test means (M) and standard deviations (SD) at pre-testing and post-testing. The table also gives the point maximum for each self-concept test. Both reading skill tests (CR and FWR) are based on a maximum of 10 points per school grade; that is, scores of 1-10 equal first grade level, 11-20 equal second grade level, and so on. A Contextual Reading score of 5, for example, would indicate mid-first grade reading ability, while a score of 20 would indicate the highest second grade reading level.

Separate t-tests comparing the experimental and

Table 1

Group Pre-Test and Post-Test Mean and Standard Deviation Values for Self Concept Measures and Reading Measures

	JSC	GSC	SSC	MSC	RSC	TRSC	CR	FWR
Test Maximum	30	20	11	12	12	10	(10/grade)	
Experimental:								
Pre-test M	24.18	16.35	9.88	11.06	11.00	6.29	3.65	
SD	3.58	2.12	1.05	1.30	1.41	2.20	3.43	
Post-test M	23.41	15.65	9.82	10.71	10.06	6.65	14.12	11.88
SD	3.47	2.55	0.88	0.99	2.49	2.37	9.22	8.04
Control:								
Pre-test M	23.69	15.94	9.44	10.56	9.50	6.88	3.00	
SD	3.36	2.05	1.59	1.67	2.73	2.45	3.01	
Post-test M	24.13	16.31	9.19	10.81	9.69	5.56	8.94	8.19
SD	4.21	2.36	1.60	1.56	2.58	3.05	7.50	7.40

(continued)

Table 1 (continued)

Note. Assessment measures are referred to by acronym: Joseph global self-concept test (JSC), Affective Perception Inventory (API) global self-concept test (GSC), API student self-concept test (SSC), API math self-concept test (MSC), API reading self-concept test (RSC), teacher rated global self-concept (TRSC), Contextual Reading test (CR), and Flash Word Recognition (FWR).

control groups' self-concept and reading pre-test scores were done to ascertain the initial equivalence of these groups. As seen in Table 2, all *t* values showed no significant differences between groups on any self-concept or reading measure; thus, the groups were considered statistically equivalent at pre-testing. It should be noted, however, that a strong trend for Reading Self Concept RSC) occurred, with experimental subjects scoring higher than controls.

As our primary hypotheses depended on Program subjects demonstrating significant reading gains over their control group peers, analysis of reading scores preceded that of self-concept results. Tables 1 and 2 illustrate that the control and experimental groups' Contextual Reading means did not significantly differ at pre-testing. After the Contextual Reading post-test, Program subjects showed a significant gain in reading (*M* = 10.47) compared to the control group's gain (*M* = 5.94), $t(31) = 2.07$, $p < .02$, one-tailed. Additional evidence of the Reading Program's effectiveness came from a comparison of Contextual Reading and Flash Word Recognition scores. Flash Word Recognition (FWR) had been given in conjunction with the Contextual Reading post-test. The scores of these two measures correlated strongly ($r = .83$, $df = 33$, $p < .001$), suggesting that

Table 2

Between Group Comparison of Pre-Test Means for Self-Concept Measures and Contextual Reading

	JSC	GSC	SSC	MSC	RSC	TRSC	CR
t	0.40	0.57	0.94	0.96	1.96	-0.72	0.57
p	0.69	0.57	0.36	0.35	0.06	0.48	0.57

Note. Assessment measures are referred to by acronym: Joseph global self-concept test (JSC), Affective Perception Inventory (API) global self-concept test (GSC), API student self-concept test (SSC), API math self-concept test (MSC), API reading self-concept test (RSC), teacher rated global self-concept (TRSC), and Contextual Reading test (CR).

FWR scores could supply convergent evidence of the Program's effect. The Program FWR mean (M = 11.88) did indicate a trend in the expected direction relative to the control FWR mean (M = 8.19), $t(31) = 1.37$, $p < .10$, one-tailed. Thus, the results from both measures of reading skill support hypothesis one, indicating that Program participants improve their reading skill beyond what would be expected in following the normal school curriculum (i.e., beyond the control group).

Addressing the hypothesis two link between reading gain of Program subjects and their self-concept improvement relative to control subjects, a multivariate analysis of variance (MANOVA) was used to test for an interaction between study groups and self-concept score changes from pre- to post-test. The self-concept values were calculated by subtracting subjects' self-concept pre-test scores from their post-test scores and then taking the average difference for both groups. This process was repeated for each self-concept measure, yielding the mean and standard deviation values shown in Table 3. Results from the MANOVA indicated an interaction trend $F(6,26) = 2.09$, $p < .09$ between study group and these self-concept difference values.

Six univariate F-tests were used to probe this interaction trend. Specifically, the experimental and

Table 3

Self-Concept Pre-Test to Post-Test Difference Values for Self-Concept Measures

		JSC	GSC	SSC	MSC	RSC	TRSC
Experimental:							
Pre--Post	M	-0.77	-0.71	-0.06	-0.35	-0.94	0.35
	SD	3.42	3.14	1.03	1.32	2.30	2.55
Control:							
Pre--Post	M	0.44	0.38	-0.25	0.25	0.19	-1.31
	SD	3.81	1.89	1.65	1.39	2.48	3.16

Note. Assessment measures are referred to by acronym: Joseph global self-concept test (JSC), Affective Perception Inventory (API) global self-concept test (GSC), API student self-concept test (SSC), API math self-concept test (MSC), API reading self-concept test (RSC), and teacher rated global self-concept (TRSC).

control groups' self-concept difference means were compared on each of the study's six self-concept measures. As these univariate F-tests essentially applied to a 2 (study group) x 1 (self-concept difference value) design, they provided the same probability figures as would a series of two-tailed t-tests. This observation has bearing on the significance of our univariate F-test results. The hypotheses of this study were directional; that is, our interest lay in one direction of difference (whether Program subjects' increased reading ability yields higher self-concept gains than seen in the control group). Since the F values are for only two groups and the hypotheses were directional, one-tailed analysis of the F values could be interpreted easily, were deemed appropriate, and accordingly replaced two-tailed results.

The single significant result was for teacher-rated global self-concept $F(1,31) = 2.80$, $p < .05$, with Program subjects, as predicted, ranking higher than control subjects over time. The nonsignificance between groups on math self-concept was expected because of the presumed lack of impact a reading program would have on this self-concept dimension. As evidenced by the lack of significance for the remaining self-concept

measures, the hypothesized between groups' differences did not materialize. In fact, reading self-concept, our variable most tied to reading gain, showed a nonsignificant pattern of change counter to prediction $F(1,31) = 1.84$, $p < .19$, two-tailed (Program subjects ranking lower than controls over time).

In brief, we did not find the widespread and significant Program self-concept gains relative to controls as predicted by hypothesis two. In partial support of hypothesis two, however, the results showed that teachers rated the global self-concept of Program subjects significantly above that of control subjects over time.

At this point, a multiple regression analysis was used to explore how three independent variables (group membership, Contextual Reading difference value, and Flash Word Recognition score) related to teachers' ratings of student self-concept (TRSC). The multiple regression analysis for TRSC yielded an R square of .20, $F(2,29) = 2.40$, $p < .10$. This marginally significant value indicated that the combined predictor variables accounted for 20% of the variance in teachers' ratings. However, a high degree of multicollinearity between the reading achievement variables ($r = .83$) made their BETA weight interpretation unreliable. Complete results from

the multiple regression analysis are listed in Table 4. The most notable result of this analysis concerns the surprisingly low combined predictive capacity of group membership and reading scores. Although this result cautions against attributing too much self-concept influence to group membership or reading gain, it does not explain how subgroup differences may have affected overall outcome patterns; for example, how potentially contrasting TRSC patterns for most improved Program and control readers could offset each other in the overall analysis. This leads us to the next stage of investigation, where we focus on the separate results of most and least improved readers.

Table 1 indicated very large standard deviations for Contextual Reading post-test and Flash Word Recognition means. The magnitude of these deviations suggest that within both study groups there were some subjects whose reading improved substantially more than did others'. To help explore this and address hypothesis three, the most improved readers (MIR subgroup) were separated from the least improved readers (LIR subgroup) regardless of membership in either the experimental or control group.

Subjects entered the MIR subgroup depending on whether their Contextual Reading (CR) gains from pre- to

Table 4

Results from Contextual Reading Gain, Flash Word Recognition, and Group Membership Regressed Onto Teacher-Rated Global Self-Concept

Multiple R	.45		
R Square	.20		
F	2.40		
p	.09		
	CRG	FWR	GROUP
B	0.26	-0.23	-1.34
Standard Error B	0.14	0.11	1.03
BETA	.58	- .61	- .23
F	3.42	4.10	1.70
p	.07	.05	.20

Note. CRG refers to Contextual Reading Gain from pre-test to post-test; FWR refers to Flash Word Recognition; GROUP refers to group membership.

post-test equaled or exceeded a year-in-school based criterion. All subjects whose CR gain fell below the cutoff placed in the LIR subgroup. The criterion was calculated on the Contextual Reading scale of 10 points per school year. It was set at 5 points for first graders, 8 points for second graders, and 10 points for third graders. For example, a first grade student whose CR difference value (reading gain) was 5 points would place in the MIR subgroup; however, a third grade student who also had a difference value of 5 would enter the LIR subgroup. This increasing cutoff level reflected higher reading performance expectations associated with increasing grade levels.

A 2 (MIR and LIR Subgroups) x 6 (Self-Concept Difference Values) MANOVA was used to explore self-concept changes over time between all the study's most and least improved readers. The multivariate tests for an interaction effect $F(6,26) = 1.02$, $p = .44$ did not show significance, nor did the follow-up univariate F-tests, again one-tailed, on each self-concept scale. Univariate results are listed in Table 5. This lack of significance precluded further comparison of subgroups across self-concept dimension. Contrary to the first component of hypothesis three, all subjects who showed the most improvement in reading did not significantly

Table 5

Analysis of Overall MIR/LIR Subgroup Differences on Self-Concept Measures

	JSC	GSC	SSC	MSC	RSC	TRSC
F(1,31)	0.57	0.83	1.41	0.07	0.38	1.51
1-tailed *p**	.23	.19	.12	.40	.28	.12

Note. Assessment measures are referred to by acronym: Joseph global self-concept test (JSC), Affective Perception Inventory (API) global self-concept test (GSC), API student self-concept test (SSC), API math self-concept test (MSC), API reading self-concept test (RSC), and teacher rated global self-concept (TRSC).

*See text.

raise their reading, student, or global self-concept scores relative to those subjects who showed the least improvement in reading. Counter to the second component of hypothesis three, the study's most improved readers did not show increasingly significant gains over the least improved readers from global to student to reading self-concept; in fact, these overall subgroups did not show significant self-concept differences at all. Although again this was expected for math self-concept, it was not for the other self-concept measures.

The latter findings suggested that reading improvement alone did not have a significant impact on the various measures of self-concept. To help understand how reading improvement within groups related to self-concept, separate MANOVAs were run for the experimental and control groups. Each group was separated into its own MIR and LIR subgroups. Table 6 lists the n, mean, and standard deviation self-concept pre-test values for each group's MIRs and LIRs. None of these pre-test means differed significantly when within Program and within control group MIR and LIR subgroups were compared, as can be seen in Table 7. Finally, Table 8 gives the mean and standard deviation values of within group (i.e., MIR and LIR subgroups) self-concept and contextual reading change.

Table 6

MIR and LIR Sample Size, Mean, and Standard Deviation Self-Concept Pre-Test Values for Program and Control Groups

	n	JSC	GSC	SSC	MSC	RSC	TRSC
Experimental:							
MIR n	11						
M		23.45	15.73	9.91	11.09	10.82	6.64
SD		3.75	1.49	1.04	1.22	1.54	2.25
LIR n	6						
M		25.50	17.50	9.83	11.00	11.33	5.67
SD		3.08	2.74	1.17	1.54	1.21	2.16
Control:							
MIR n	5						
M		23.20	15.20	9.80	10.60	10.60	6.80
SD		2.28	2.86	1.64	2.07	2.61	2.95

(continued)

Table 6 (continued)

		n	JSC	GSC	SSC	MSC	RSC	TRSC
Control:								
LIR	n	11						
	M		23.91	16.27	9.27	10.55	9.00	6.91
	SD		3.83	1.62	1.62	1.57	2.76	2.34

Note. Assessment measures are referred to by acronym: Joseph global self-concept test (JSC), Affective Perception Inventory (API) global self-concept test (GSC), API student self-concept test (SSC), API math self-concept test (MSC), API reading self-concept test (RSC), and teacher rated global self-concept (TRSC).

Table 7

Within Group Comparison of MIR and LIR Self-Concept Measure Pre-Test Means

		JSC	GSC	SSC	MSC	RSC	TRSC
Experimental:							
	t	1.14	1.47	-0.14	-0.13	0.71	-0.86
	p	.27	.19	.89	.90	.49	.40
Control:							
	t	0.38	0.97	-0.60	-0.06	-1.09	0.08
	p	.71	.35	.56	.95	.29	.94

Note. Assessment measures are referred to by acronym: Joseph global self-concept test (JSC), Affective Perception Inventory (API) global self-concept test (GSC), API student self-concept test (SSC), API math self-concept test (MSC), API reading self-concept test (RSC), and teacher rated global self-concept (TRSC).

Table 8

MIR and LIR Mean and Standard Deviation of Pre-Test to Post-Test Change for Program and Control Groups on Self-Concept Measures and Contextual Reading

	JSC	GSC	SSC	MSC	RSC	TRSC	CR
Experimental:							
MIR M	0.27	0.27	-0.09	-0.27	-0.45	1.00	14.10
SD	2.61	2.53	1.22	1.49	1.23	2.14	5.74
LIR M	-2.67	-2.50	0.00	-0.50	-1.83	-0.83	3.83
SD	4.13	3.56	0.63	1.05	3.60	2.99	2.48
Control:							
MIR M	0.40	0.20	-1.20	0.20	0.60	-1.60	11.60
SD	3.58	3.03	0.84	0.45	3.36	1.52	6.50
LIR M	0.45	0.45	0.18	0.27	0.00	-1.18	3.36
SD	4.08	1.29	1.78	1.68	2.14	3.74	2.25

(continued)

Table 8 (continued)

Note. Assessment measures are referred to by acronym: Joseph global self-concept test (JSC), Affective Perception Inventory (API) global self-concept test (GSC), API student self-concept test (SSC), API math self-concept test (MSC), API reading self-concept test (RSC), teacher rated global self-concept (TRSC), and Contextual Reading test (CR).

The within group MANOVAs used the previous 2 (MIR and LIR Subgroups) x 6 (Self-Concept Difference Values) design, and included univariate F-test analysis following the overall multivariate tests of interaction significance. Neither the interaction for the experimental group $F(6,10) = 1.59$, $p = .25$, nor for the control group $F(6,9) = 0.89$, $p = .54$, was significant.

Based on hypotheses four and five, it follows that each group's most improved readers would show greater self-concept gains than its least improved readers. As our univariate F-tests apply to a 2 (MIR and LIR Subgroups) x 1 (Self-Concept Difference Value) design, the previously mentioned relevance of one-tailed results again applies. Program results showed significant differences for both self-report measures of global self-concept ($p < .05$) and marginal significance for teacher-rated global self-concept ($p < .10$). Complete results from the Program's follow-up F-tests are listed in Table 9.

Although Tables 8 and 9 indicate that the significant Program results were in the predicted direction, pre-test values from Table 7 show that initial subgroup differences on both self-report measures could account for their significant change (i.e., their opposite directions of change could

Table 9

Analysis of Program MIR/LIR Subgroup Differences on Self-Concept Measures

	JSC	GSC	SSC	MSC	RSC	TRSC
F(1,15)	3.28	3.51	0.03	0.11	1.43	2.15
1-tailed *p**	<.05	.04	.44	.38	.13	.08

Note. Assessment measures are referred to by acronym: Joseph global self-concept test (JSC), Affective Perception Inventory (API) global self-concept test (GSC), API student self-concept test (SSC), API math self-concept test (MSC), API reading self-concept test (RSC), and Teacher rated global self-concept (TRSC).

*See text.

indicate regression to the mean). None of the other self-concept measures were significantly different for the Program subgroups. It is interesting to note, however, that reading self-concept essentially held even for the Program's most improved readers while dropping almost two points for its least improved readers.

In summary, the univariate F results for the Program's MIRs and LIRs indicate partial support for hypothesis four. This hypothesis stated that Program MIRs would show significantly more reading, student, and global self-concept enhancement than the Program's LIRs. Tentative support for this hypothesis came from the global measures of self-concept, where teachers' ratings showed a nonsignificant trend in the predicted direction, and where both self-report measures indicated significantly higher MIR gains over the LIR subgroup. The latter two findings, however, are tempered by the possibility of statistical regression.

In contrast to the Program's subgroups, the control group's most and least improved readers did not approach significant difference on any of the self-concept dimensions. Thus, hypothesis five, which stated that the control group's most improved readers show significantly more reading, student, and global self-concept enhancement than its least improved

readers, received no support from these analyses.

While not a formal element of hypotheses four and five, it should be noted that math self-concept, as would be expected according to the reading skills model, did not show significant subgroup differences for either study group.

A final data presentation concerns reading self-concept differences within the Program and control groups. Earlier we noted that reading self-concept (RSC) was the only between groups' measure to approach significance at pre-testing, with Program subjects scoring higher than controls ($p = .06$). Looking at RSC pretest means for each group's most and least improved readers helps explain this original between groups' difference. While both groups' most improved readers and the Program's least improved readers all averaged 11 RSC points at pre-testing, the control's least improved readers averaged only 9 RSC points. Thus, it is reasonable to assume that initial group differences in reading self-concept stemmed from the relatively poor pre-test scores of the control group's eventual least improved readers. This can be seen more clearly in Table 10, which makes explicit the combined RSC information of Tables 6 and 8.

Table 10

Program and Control MIR/LIR Means and Standard Deviations for Reading Self-Concept at Pre-Test and Post-Test

	Program RSC	Control RSC
Test Maximum	12	12
MIR:		
Pre-test *M*	10.82	10.60
SD	1.54	2.61
Post-test *M*	10.36	11.20
SD	1.43	1.30
LIR:		
Pre-test *M*	11.33	9.00
SD	1.21	2.76
Post-test *M*	9.50	9.00
SD	3.89	2.76

Note. RSC refers to the self-report reading self-concept measure.

CHAPTER V

DISCUSSION

This study explored the potential relationship between a remedial reading program and self-concept enhancement. Given the evidence tying literacy and positive self-concept to a child's healthy development, a chance to clarify their relationship was seen as highly justified. The study proposed five hypotheses to probe the link between subjects' reading gain and their self-concept enhancement. Each hypothesis was based on current theory and research positing a positive, if not causal, connection between the two variables. Supporting hypothesis one, the Reading Program did significantly raise participants' reading ability relative to their control group peers. Further results gave limited support to the remaining self-concept hypotheses, generally indicating a mixed effect of reading improvement and Program membership on self-concept gain. These findings are discussed below as each hypothesis and its analyses are presented.

The pre-test equivalence found between the study's Program and control groups on Contextual Reading and

each self-concept scale considerably helped our analyses by indicating group comparability. Unfortunately, the single deviation from equivalence concerned reading self-concept, the dependent variable whose change seemed most probable in relation to reading improvement. As indicated at the end of Chapter IV, this deviation apparently resulted from the least improved control readers pre-testing below all other readers from both groups. More will be said about this initial difference and its effects as we continue.

Between Groups' Reading Improvement

Hypothesis one predicted that Program members would increase their reading ability more than nonmembers (the control group). The Program did significantly raise members' Contextual Reading scores from pre- to post-test beyond control group gain. These scores, together with similar (though marginally significant) between group differences seen in Flash Word Recognition test results, supported hypothesis one. Given the difficulties of weekly tutoring for both tutors and children, the very beginning reading level of Program members, and especially given the critical need for developing literacy, this outcome should not be minimized. Our proposed link to additional gains in self-concept, however, asks that we look beyond reading

improvement, and brings up hypothesis two.

Between Groups' Self-Concept Improvement

Results from the investigation of hypothesis two were less clear-cut. Stemming from supportive research findings and skills model theory, hypothesis two predicted more self-concept gain in Program subjects than in control subjects. While the overall MANOVA found an interaction trend between study group and self-concept, the follow-up F-tests showed significance only for the teacher rated global self-concept (TRSC) measure. This difference was in the predicted direction, with teachers' rating the global self-concepts of Program children ahead of control children from pre- to post-test. Interestingly, it appears that the control subjects lost ground whereas the Program subjects held about even. This finding is consistent with the belief that the self-concept of less skilled students progressively falls behind that of their more successful peers with each new school year (Bridgeman & Shipman, 1978; Quandt & Selznick, 1984; Williams, 1973). Thus, our results might reflect a resistance to normal loss of self-concept imbued in subjects through their participation in the Reading Program. This idea is proposed with caution as the actual point differences described may have more statistical than clinical

clinical significance. Another reason for caution is that regression to the mean appears an alternate explanation for the TRSC differences. This possibility receives less support, however, when we later examine within group patterns of TRSC difference. At that time the elements of the Program possibly behind resistance building (e.g., reading achievement, the tutoring relationship, etc.) will receive further attention.

The only other noteworthy result from the previous F-tests was the lack of significance for reading self-concept (RSC), our variable presumably most related to reading gain. The direction of difference, in fact, was counter to expectation, with Program subjects ranking lower than controls over time. This nonsignificant pattern was unusual enough to warrant explanation, and can be understood from different perspectives. For one, the control group's subjects started lower than Program subjects in reading self-concept. Their pretest differences in reading self-concept, while not significant, were large enough to have potentially obscured true patterns of change over time. For example, if control subjects normally would have gone down in reading self-concept, simple upward regression to the mean would have worked against the statistical

manifestation of this change. Similarly, the Program subjects' RSC decrease can be seen as an elevated average score regressing to the mean at post-test, possibly masking any trend of RSC improvement. Whether speculating that such underlying RSC change exists or not, the predominant role of statistical regression in this explanation clearly limits the hypothesized influence of Program membership on self-concept.

Another consideration in explaining this F-test result concerns the high reading self-concept scores subjects gave themselves at pre-testing. Presumably poor readers would rate their reading self-concepts as low, yet only the control group's eventual least improved readers did this. Numerous researchers (e.g., Fennimore, 1968; Hake, 1969; Janowitz, 1964; Schlesinger, 1982; Silvernail, 1981) have noted a paradoxical relationship between poor academic skills and high self-concept. Specifically, some children (as well as adults) tend to perceive their skills and related self-images as quite high despite poor skills in actuality. While this self deception allows children to feel better about themselves, it can also break down as the incongruity between self-concept and reality sinks in.

Different reasons for this breakdown include

maturation (Beitchman et al., 1985), an increasing internalization, even by third grade, of the importance of school achievement (Quandt & Selznick, 1984), growth (Schlesinger, 1982), and similar phenomena. In terms of the Reading Program's effect on reading self-concept, this reasoning implies that the Program might be "calling the bluff" of its participants; simply, it would be hard to maintain an inflated sense of reading ability when enrolled in a program that members might feel is for "slow readers" and where the struggles of weekly lessons might serve as a reminder of one's reading deficits. Such a perspective would account for the drop in Program members' reading self-concept while the control mean held even (nobody was calling their bluff). More will be said about this possibility when the performance of each group's least and most improved readers is addressed.

Discrepancies in Measurement

Before going on, it is worth commenting on the discrepancy between the teacher rated and self-reported change in global self-concept as seen in the previous *F*-test results. Given the numerous criticisms of self-report measures, especially for use with young children, the finding of significance through our single

observational measure may simply affirm that adult observers accurately report global self-concept change whereas young children using self-report measures do not. Whether this means the measures were not sensitive enough or the children not old enough, the point would remain that teacher ratings may be the more powerful assessment tool.

On the other hand, a different conclusion can be reached if one assumes the accuracy of both observation and self-report findings. That is, the discrepancy may actually indicate different points of view--the teachers' and the children's. While teachers might have felt that control subjects generally went down in global self-concept relative to Program subjects, the children themselves might not have perceived any differences. A lack of true differences raises the possibility of teacher bias favoring Program subjects. The teachers were not told which children were in the Program, but could easily have identified participants as the year went on. If so, it is possible that their ratings more reflect Program membership than actual change in self-concept. As shall be seen, the separation of most and least improved readers again helps clarify this issue. As a final confound mentioned here, it is possible that all three measures (teacher rated global

self-concept, TRSC; Joseph global self-concept, JSC; API global self-concept, GSC) tap different aspects of what is conveniently labeled "global self-concept." Certainly the teacher rating scale is far less detailed than the self-report measures, while all three pose different questions, use different formats, different materials, etc. These and other study measures can be reviewed in Appendices A-F.

Overall Most and Least Improved Readers

The separation of most and least improved readers introduces our remaining hypotheses, each of which required this separation as a first step in data analysis. As indicated above, these subgroups also might help to explain particular findings of between groups' comparison. Analysis began with an overall comparison of most improved readers (MIR) and least improved readers (LIR) as called for in hypothesis three, followed by comparisons within the Program group (hypothesis four) and the control group (hypothesis five). In accord with the skills model, these hypotheses predicted similar comparison outcomes; in short, a pattern of greater self-concept improvement for MIRs regardless of group membership.

The first analysis addressing reading improvement did not create actual subgroups but did begin comparison

of overall effects. Predictor variables of group membership, Contextual Reading gain, and Flash Word Recognition score were regressed onto teachers' ratings of self-concept (TRSC), the one measure found significantly different between groups. As factors theoretically capable of influencing self-concept change, the independent variables chosen seemed appropriate as predictors. Results showed marginally significant predictive capacity (20%) overall for TRSC, but a high degree of multicollinearity (r = .83, df = 33, p < .001) between the reading predictor variables made BETA weight interpretation impossible. These findings, while not conclusive, do suggest that these predictor variables had less to do with self-concept change than expected. This is worth bearing in mind when examining the results of other data analyses; conversely, alternative analyses are needed to make up for the potential limitations of the regression analysis. For example, later findings indicated that Program and control MIR subgroups show opposite TRSC patterns from each other and in part from their LIR counterparts; these differences potentially could wash out in a correlational analysis like multiple regression and justify the need for analyses by subgroup.

Directly addressing hypothesis three, overall MIR

and LIR subgroups were compared across self-concept measures. Counter to prediction of the skills model, no significance was found at either the multivariate or univariate level between these subgroups. As indicated, these results rendered investigation of MIR and LIR difference patterns by self-concept dimension a moot exercise. A lack of significance was expected for math self-concept, but not for all the self-concept scales. This result suggested that unaccounted for factors, possibly group membership, played a role in self-concept change, and correspondingly limited the explanation of self-concept change based on the skills model alone. In consequence, within group analysis of MIR and LIR subgroups became all the more appropriate.

Program Most and Least Improved Readers

Hypothesis four concerned the self-concepts of Program subgroup members; specifically, how the Program's most and least improved readers differed in self-concept change. True to the skills model, Program MIRs were expected to show more self-concept gain than Program LIRs. Although an overall interaction (MIR and LIR subgroups x Self-Concept Difference Values) was not found, MIRs did significantly outgain LIRs on both measures of global self-concept and approached significance in the predicted direction on teachers'

ratings of this dimension. The previous overall comparison by subgroup indicated that reading achievement alone was not responsible for self-concept change, yet reading gain's influence on self-concept for Program participants now appeared important. As all findings were in the predicted direction, it raised the possibility of a joint Program membership-reading improvement influence on global self-concept. Rather than supporting the skills model (i.e., effect of reading achievement) or the self model (i.e., effect of direct self-concept intervention) as ways to boost self-concept, this combined variable perspective affirms the integrated approach of the psychoeducational model. While not dramatic, our results do seem to underscore a pattern of self-concept gain based more in both reading achievement and factors of program membership aside from reading success.

This idea, however, must be considered in light of the pre-test differences shown by the subgroups. On both self-report measures of global self-concept, the changes described above might easily have resulted from regression to the mean. Only the teachers' ratings, which changed away from the mean for both subgroups, can meet the criticism of statistical regression; thus, the possibility of a combined variable influence on

self-concept remains tenable.

The MIR and LIR division and possibility of joint Program membership-reading achievement influence can shed more light on the global self-concept discrepancies between teacher ratings and self-report discussed earlier. For one, it is less likely that the self-report measures of global self-concept were insensitive given evidence that the contrasting Program subgroup effects cancelled each other out. It also appears more plausible that the teachers and Program subjects were in agreement as to global self-concept ratings; that is, the most and least improved Program readers appeared to agree with teachers' assessments of their global self-concepts. Furthermore, this analysis does not support the idea of teacher bias toward Program subjects. If this were the case, teachers would have had to select out Program subjects, and then distinguish the most from the least improved Program subjects, in order for a pattern of bias to match the ratings they gave. It seems less tenuous to argue that teachers' ratings accurately reflected the self-concept differences that subjects themselves seem to have perceived. Such confluence would also lend credence to the possibility that these three measures tap the same dimension of (presumably global) self-concept.

Despite the theoretical appeal of the such speculation, it assumes that the self-reported global self-concept change was not an artifact of statistical regression. Yet while the possibility of regression must be acknowledged, it does appear less plausible given the nonregression patterns of TRSC change noted for study subgroups. To summarize both sides, one can either argue that the three global self-concept measures' similar outcome patterns demonstrated convergent evidence or that they demonstrated observational measure accuracy combined with statistical regression in self-report.

Control Most and Least Improved Readers

In one sense, the control subgroup comparison for hypothesis five further supported the notion of a combined Program membership-reading achievement influence. Whereas it was hypothesized that the control group's MIRs would significantly outgain its LIRs on all self-concept dimensions save math, none of the self-concept measures showed significant differences, even on the global self-concept dimension. As with the overall subgroup analysis, these results indicated a lack of effect for reading improvement alone, thus adding support to the notion that Program membership must accompany reading gain to influence self-concept.

On the other hand, similar MIR and LIR global self-concept means (JSC and GSC) between the control and Program groups at post-test again indicate that Program subgroup change may have resulted from statistical regression. Once more the pattern of teachers' ratings, this time decreased for both control group MIRs and LIRs, provides resistance to the regression confound (i.e., despite TRSC pre-test equivalence for Program and control subgroups, only the Program MIRs went up in teachers' ratings).

Reading Self-Concept

Here we return to the self-concept dimension whose nonsignificant change and contrary directions of difference merit attempted explanation. The concluding comment of Chapter IV indicated that between groups' difference on the reading self-concept (RSC) pre-test resulted from below average scores of the control LIRs. The use of subgroup analysis with reading self-concept can also help clarify the surprising lack of significant difference between the Program and control groups in RSC change over time. Specifically, Table 10 indicates that the only subgroup to change by at least one point was the Program's LIRs. Just looking at RSC gain scores for the two study groups, as the initial *F*-test did, misrepresents this Program LIR difference as an overall

Program difference. Our focus thus switches from how to explain a lack of group RSC differences to explaining subgroup differences.

Earlier we noted that both statistical regression and subject bluffing were possible explanations of reading self-concept changes. Analysis of RSC values from Table 10 lends more credence to the notion of subject bluffing. Regression can not account for the divergent change patterns from pre- to post-test manifested by the four subgroups. In contrast, bluffing implies unrealistically high scores initially that drop if faced with the reality of poor skills; hence, it implies a pattern of self-concept change that accounts for the RSC variation by group and subgroup better than statistical regression can.

Both Program MIRs and LIRs did rate their initial reading self-concepts highly. While the post-test drop in LIR ratings would appear to reflect their bluff being called, the Program MIRs showed little drop in their RSC rating. The skills model and bluffing literature would suggest that the MIRs' skill improvement compensates for their RSC bluff being called. In essence, while the Program LIRs had to face their reading weakness, the MIRs could fall back on actual improvement in reading.

The reading self-concept change seen in the

control MIRs also fits a skills/bluffing pattern. These subjects likewise gave themselves high RSC pre-test marks despite poor reading skills. Their slightly higher RSC post-test scores (the highest of all the subgroups) may reflect both their improved reading skill and the absence of a reading program to call their initial bluff. Control LIRs, in contrast, began and ended the study with the same relatively low RSC average. Disagreeing with the bluffing explanation of score patterns, their RSC pre-test scores appear to better match actual ability than any of the other subgroups' pre-test scores do. Still, one would expect that without the Reading Program to reinforce reading difficulty, there would be the observed lack of change in reading self-concept.

In summary, while the latter explanation of reading self-concept patterns is clearly speculative, it brings some order to initially confusing results. Whether this order ultimately proves viable is a question for further research efforts to answer.

Study Limitations and Future Directions

As implied in the previous paragraph, future study of the relationship between reading achievement and self-concept enhancement can only shed more light on their complex relationship. Before addressing this

topic, it is worth noting some of the limitations of the present study to avoid encountering the same difficulties later.

A central question raised by both the discrepancy between our single observational measure and its two self-report counterparts as well as by the narrow ranges of score change across our self-concept measures concerns the sensitivity of these measures. Specifically, were the Joseph and API self-concept tests sufficiently able to detect self-concept change if it was present? This question returns to the issues surrounding children's self-report and its reliability. With children this young, it may be more revealing to emphasize behavioral observation as the primary assessment tool; certainly the predominant role of teachers' ratings in this study's results attests to the legitimacy of this consideration. In either case, it appears well worth the effort to pilot test these measures prior to the actual study to determine how discriminating they are (both of each other and of subjects).

As for the narrow range of change scores in this study's results, it is hard to say whether they accurately represent about as much change as one could expect when looking at a byproduct effect (self-concept

change stemming from reading gain), or whether this too reflects the insensitivity of our measures. Clearly caution must be used when interpreting even the strongest results shown, for it is impossible to assuredly step from the statistical significance of relatively small point differences to the assumption of clinical significance.

Should self-report measures be used at all, it would be worth using a some kind validity check to identify the suspected "bluffing" pattern if it occurs. In this study, we could only assume that children with poor reading skills were bluffing when pre-testing so high in reading self-concept. If there were a more objective and precise validity scale built into the overall measure, the information provided could be both diagnostically helpful and validity enhancing.

Finally, as an obvious element of possible Program effect on self-concept separate from reading gain, the role of the tutor needs to be assessed. Lacking this in our study, various combinations of readers had to be compared to tease out the non-reading effects of the Program. It seems a more direct route to simply ask the tutors, perhaps even the children, how they perceived their tutoring relationship on an objective scale.

The latter limitation in our study leads to the

topic of future directions of reading and self-concept studies. The most relevant findings of this investigation appear those suggesting the combined impact of reading achievement and Program membership on self-concept gain. Aside from the basic need for replicating these results, future work could aim at clarifying this synergistic relationship as well as attempting to distinguish the critical elements of each variable that most contribute to effectiveness. A related effort would be to longitudinally probe how enduring any self-concept changes are. The promise of the skills model was in its assumption that self-concept gain would be enduring because this change related to a retained skill; if the psychoeducational model is more effective at boosting self-concept, does this mean that the nonreading component (i.e., of the Program) needs to be continually repeated to maintain the same self-concept effect?

In addition to a longitudinal study of self-concept change resiliency, it would be helpful to probe the process of this change in more detail. Most useful here would be a study that assesses reading and self-concept change at multiple points during the study year (or during each study year if in a longitudinal investigation). In this way, more precise statements

could be made about the relationship between reading and self-concept improvement as it develops.

To talk about the need for sensitive self-concept measures and built-in validity scales presumes their existence currently. In fact, as indicated in the Chapter III, the measures used in this study were among the most recommended in the field. It is apparent that future efforts must be directed toward developing as reliable and valid self-concept instruments as possible, whether self-report, observational, or both.

Summary

The purpose of this study was to explore the potential relationship between a remedial reading program and the self-concept enhancement of program participants and their control group peers. This goal primarily stemmed from skills model theory, which stipulates that self-concept gains are achieved when accompanied by reading improvement. Hence, a number of other hypotheses were formulated for examination between and within study groups, each carrying the theme that more reading improvement should mean more self-concept improvement regardless of which pair of groups was being compared. Ultimately, the overriding purpose was to clarify the reading and self-concept connection so as to make its potential benefits available to disadvantaged

children.

While the Reading Program was effective in significantly promoting the reading gain of participants relative to control subjects, the self-concept effects were not so clear-cut. Virtually all results needed to be cautiously interpreted due to small sample size, questionable clinical significance of results, and the possibility of statistical regression. Nonetheless, some findings showed promise. For one, it seemed that teachers noted improvement in the Program subjects' global self-concepts, essentially among those subjects who showed the most improvement in reading. This pattern seemed to parallel the children's self-reports, suggesting that the most global self-concept change came for those subjects who improved the most in reading and were also in the Program. This finding, if accurate, supports the psychoeducational model of self-concept development more than either the skills or self models. It also indicates two general factors (i.e., reading improvement and program membership) that may build a less skilled child's resistance to the normal self-concept deterioration experienced over time in school.

Although more speculative, nonsignificant reading self-concept patterns in this study suggested that

success in the Reading Program enables children to maintain what were inaccurately high reading self-concepts, whereas a lack of reading improvement for Program participants may force them to lower their reading self-concept to a more realistic level.

This study clearly leaves vast terrain to be covered in the area of reading achievement and self-concept enhancement. If anything, the multifaceted nature of these qualities' relationship is more obvious now at the conclusion of our investigation. The need for further research is as necessary as it is promising, and stands to make considerable impact on the development and lives of disadvantaged children.

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APPENDIX A

Joseph Pre-School and Primary Self-Concept Screening Test (JSC)

1. ONE OF THESE BOYS (GIRLS) IS VERY CLEAN AND THE OTHER BOY (GIRL) IS VERY DIRTY. Distinguish. NOW WHICH ONE IS MOST LIKE YOU? Confirm (e.g., SO YOU'RE A CLEAN BOY).

Scoring

clean=2 both or don't know (DK)=1 dirty=0

2. ONE OF THESE BOYS (GIRLS) HAS NO ONE TO PLAY WITH AND ONE OF THESE BOYS (GIRLS) IS PLAYING WITH LOTS OF FRIENDS. Distinguish. NOW WHICH ONE HAPPENS TO YOU THE MOST? Confirm (if child seems unable to understand the situation ask: DO YOU PLAY ALONE OR WITH FRIENDS? Then score verbal response).

Scoring

friends=2 both or DK=1 alone=0

3. ONE OF THESE BOYS (GIRLS) HAS A TEACHER WHO DOESN'T LIKE HIM (HER) VERY MUCH AND THE OTHER BOY (GIRL) HAS A TEACHER WHO LIKES HIM (HER) A LOT. Distinguish. NOW WHICH ONE HAPPENS TO YOU THE MOST? Confirm (if child seems unable to understand the situation, ask: DOES YOUR TEACHER LIKE YOU OR NOT? Then score verbal response).

Scoring

likes=2 both or DK=1 doesn't like=0

4. DO YOU HAVE A BROTHER OR A SISTER? WHAT'S HIS (HER) NAME? (If more than 1 sibling say: GIVE ME JUST ONE OF THEIR NAMES). Select appropriate stimulus card and say: NOW LET'S PRETEND THAT THIS IS YOUR BROTHER (SISTER)_____ OK? NOW WHO DO YOU THINK YOUR MOMMY AND DADDY LIKE BETTER, YOU OR _____? Confirm. (If child's response is "both of us" ask: BUT IF THEY HAD TO PICK JUST ONE, WHO DO YOU THINK THEY WOULD PICK?)

Scoring

me or both of us on second inquiry=2 DK or sometimes each of us=1 pick sibling on first or second inquiry=0

*Note: If child has no siblings then question becomes: DO YOUR MOMMY AND DADDY LIKE YOU? No picture would be used in this case.

Scoring

yes=2 sometimes or DK=1 no=0

5. ONE OF THE BOYS (GIRLS) IS GETTING SPANKED BY HIS (HER) MOTHER AND THE OTHER BOY (GIRL) IS GETTING CANDY FROM HIS (HER) MOTHER. Distinguish. NOW WHICH ONE HAPPENS TO YOU THE MOST? Confirm.

	Scoring	
candy=2	both or DK=1	spanked=0

6. ONE OF THESE BOYS (GIRLS) HAS A BUNCH OF TOYS TO PLAY WITH AND THE OTHER BOY (GIRL) HAS NO TOYS TO PLAY WITH. Distinguish. NOW WHICH ONE HAPPENS TO YOU THE MOST? Confirm.

	Scoring	
toys=2	both or DK=1	no toys=0

7. ONE OF THESE BOYS (GIRLS) KNOWS HOW TO SAY LOTS OF WORDS AND THE OTHER BOY (GIRL) CAN ONLY SAY A FEW WORDS. Distinguish. NOW WHICH ONE IS MOST LIKE YOU? Confirm.

	Scoring	
lots=2	both or DK=1	few=0

8. ONE OF THESE BOYS (GIRLS) IS A SLOW RUNNER AND THE OTHER BOY (GIRL) CAN RUN VERY FAST. Distinguish. NOW WHICH ONE IS MOST LIKE YOU? Confirm.

	Scoring	
fast=2	both or DK=1	slow=0

9. (No pictures are required)
WHAT'S YOUR FIRST NAME? DO YOU LIKE THAT NAME OR WOULD YOU RATHER HAVE ANOTHER NAME? Confirm.

	Scoring	
likes name=2	both or DK=1	doesn't like=0

10. ONE OF THESE BOYS (GIRLS) CAN JUMP VERY HIGH AND THE OTHER BOY (GIRL) CAN'T JUMP VERY MUCH AT ALL. Distinguish. NOW WHICH ONE IS MOST LIKE YOU? Confirm.

	Scoring	
jump high=2	both or DK=1	can't jump=0

11. (Three pictures are required)
HERE ARE SOME BOYS AND GIRLS PLAYING BASEBALL. ONE BOY (GIRL) WINS THE GAME AND THE OTHER BOY (GIRL) LOSES THE GAME. Distinguish as follows: NOW OUT OF THESE TWO BOYS (GIRLS), WHICH ONE WINS? NOW WHICH ONE IS THE LOSER? NOW WHICH ONE HAPPENS TO YOU THE MOST? Confirm.
*Note: If child says "I've never done that," then ask: BUT IF YOU DID PLAY BASEBALL, DO YOU THINK THAT YOU WOULD WIN OR LOSE?

Scoring

win=2 both or DK=1 lose=0

12. HERE ARE TWO BOYS (GIRLS) THAT ARE TRICK-OR-TREATING AT HALLOWEEN. ONE BOY (GIRL) GETS LOTS OF CANDY AND THE OTHER BOY (GIRL) ONLY GETS A LITTLE CANDY. Distinguish. NOW WHICH ONE HAPPENS TO YOU THE MOST? Confirm.

*Note: If the child says "I've never done that," then ask: BUT IF YOU DID GO TRICK-OR-TREATING, DO YOU THINK THAT YOU WOULD GET LOTS OF CANDY OR ONLY A LITTLE CANDY?

Scoring

lots=2 both or DK=1 little=0

*Note: See Administration Section of manual for rewording of this item for children with limited or no exposure to the custom of Halloween.

13. ONE OF THESE BOYS (GIRLS) IS A BAD BOY (GIRL) AND THE OTHER BOY (GIRL) IS A GOOD BOY (GIRL). Distinguish. NOW WHICH ONE ARE YOU? Confirm.

Scoring

good=2 both or DK=1 bad=0

14. ONE OF THESE BOYS (GIRLS) IS SMILING AND THE OTHER BOY (GIRL) IS CRYING. Distinguish. NOW WHICH ONE DO YOU DO THE MOST? Confirm.

Scoring

smile=2 both or DK=1 cry=0

15. (No pictures are required)
WHERE DO YOU LIVE, IN A HOUSE OR A BIG APARTMENT BUILDING? DO YOU LIKE LIVING IN THAT HOUSE (APARTMENT) OR WOULD YOU RATHER LIVE SOMEWHERE ELSE? Confirm.

Scoring

likes where lives=2 sometimes or DK=1 rather live somewhere else=0

APPENDIX B

Soares API/P (Global) Self-Concept Scale (GSC)

What kind of person do you think you are right now? Give a picture of yourself by circling the words at the end of the line which best tell how you look at yourself as a person:

Example:

I am a fat person._____I am a skinny person.

Be sure to circle only one set of words for each line. Remember: There are no right or wrong answers--only the answers which best show how you feel about yourself as a person at this moment.

---

1. I am a boy._____I am a girl.

2. I am a happy person._____I am not a happy person.

3. I am kind to people._____I am not kind to people.

4. I have many friends._____I do not have many friends.

5. I am not easily hurt._____I am easily hurt.

6. I like to be with others._____I would rather be alone.

7. I think of others._____I think only of myself.

8. I do not worry a lot about things._____I worry a lot about things.

9. I am not afraid of many things._____I am afraid of things.

10. I can wait for things._____I want things right away.

11. I do not mind things changing._____I do not like to change.

12. Before I do something, I think about it. _____I do not think about something before I do it.

13. I like the way people act._____ I do not like the way people act.

14. I do not get angry easily._____ I get angry easily.

15. I do what I want to do._____I do what my friends want to do.

16. I do things well._____I do not do things well.

17. I think I can do things well by myself. _____I do not think I can do things well by myself.

18. I think people can be trusted._____ I do not think people can be trusted.

19. I am somebody special._____I am nobody special.

20. I am glad I am me._____I would like to be someone else.

APPENDIX C

Soares API/P Student Self-Concept Scale (SSC)

People are different in the ways they think about themselves because of the different things they do. A boy can be a son, a brother, a skater, and a pupil in school. A girl can be a daughter, a sister, a baseball player, and a pupil in school. What kind of pupil are you? Give a picture of yourself as a pupil by circling the words at the end of the line which you think best tell how you look at yourself as a pupil.

---

1. I like to learn._____I do not like to learn.

2. I work hard in school._____I am lazy in school.

3. I learn quickly._____I learn slowly.

4. I do well in school._____I do not do well in school.

5. I like to work with others in school. _____ I like to work by myself in school.

6. I do neat work in school._____I do careless work in school.

7. I get things done on time in school. _____I do not get things done on time in school.

8. I am smart._____I am not smart.

9. I want my school work to be good. _____I do not care how my school work is.

10. I like to try new things in school. _____I am afraid to try new things in school.

11. I feel good when I am in school._____I do not feel good when I am in school.

APPENDIX D

Soares API/P Arithmetic Perceptions (Math Self-Concept, MSC)

How do you feel about arithmetic? How do you see yourself as a pupil in arithmetic? Give a picture of how you feel by circling the words at the end of the line which you think best tell how you feel in arithmetic.

---

1. I like arithmetic._____I do not like arithmetic.

2. Arithmetic is easy for me._____Arithmetic is hard for me.

3. I learn a lot from arithmetic._____I do not learn alot from arithmetic.

4. I am good with numbers._____I am not good with numbers.

5. Adding numbers is easy for me._____Adding numbers is hard for me.

6. I can subtract well._____I cannot subtract well.

7. I am good at counting._____I am not good at counting.

8. I think arithmetic is interesting.
_____I do not think arithmetic is interesting.

9. I like to find answers to problems in arithmetic.
_____I do not like to find answers to problems in arithmetic.

10. I like to work with numbers._____I do not like to work with numbers.

11. I can tell time._____I cannot tell time.

12. I like to make change with money._____I do not like to make change with money.

APPENDIX E

Soares API/P Reading Perceptions
(Reading Self-Concept, RSC)

How do you feel about reading? How do you see yourself as a reader? Give a picture of how you feel by circling the words at the end of the line which best tell how you feel in reading.

---

1. I like to read._____I do not like to read.

2. Reading is easy for me to do._____Reading is hard for me to do.

3. I am a fast reader._____I am a slow reader.

4. I read many books._____I do not read many books.

5. I am a good reader._____I am not a good reader.

6. I like to figure out words._____I do not like to figure out words.

7. I like to write._____I do not like to write.

8. Writing is easy for me._____Writing is hard for me.

9. I am good at writing stories._____I am not good at writing stories.

10. After reading something, I want to read it to someone else._____After reading something, I am afraid to read it to someone else.

11. It is easy for me to remember what I read. _____It is hard for me to remember what I read.

12. I am in a good reading group._____I am in a slow reading group.

APPENDIX F

Joseph Teacher Rating Scale for Global Self-Concept

Optional: In order to gain further insight into the relationship between a child's self-image and externally perceived ratings of that image, the following question may be detached and rated by an unbiased informed observer (e.g., a teacher). Prior to completing this question, the rater should not have access to the subject's (Joseph test) score performance.

Child's Name_____Rater_____

To what degree does this child display a sense of self-respect and hold a positive regard for his (her) own worthiness? (Rate by circling one number)

Always		Usually			Sometimes			Seldom		Never
10	9	8	7	6	5	4	3	2	1	0

APPROVAL SHEET

The thesis submitted by Steven A. Macuk has been read and approved by the following committee:

Dr. James E. Johnson, Director
Professor, Psychology, Loyola

Dr. Darrell Morris
Associate Professor, Education, National College of Education

Dr. Alan S. DeWolfe
Professor, Psychology, Loyola

The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the thesis is now given final approval by the Committee with reference to content and form.

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Arts.

9-27-88
Date

James E. Johnson
Director's Signature