

THE EFFECTS OF A PHYSICAL ACTIVITY INTERVENTION
ON THE SELF-CONCEPT AND BEHAVIOR
OF FIFTH-GRADE BOYS

By

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Barbara S. Cleveland

Dedicated to Jim, for his continued support and encouragement
and for the existence of Cleveland Ski School

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Abstract of Dissertation Presented to the Graduate School
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The purpose of this study was to investigate the effects of experiencing success in a physical activity on fifth-grade boys' self-concept and behavior. A unique guidance approach to learning water skiing was implemented. The water skiing intervention provided an opportunity for the children to develop awareness of the relationship between self-control and success. The setting for the intervention was at a nearby ski school located on a lake. This environment was new to the child and one in which he had no previous success or failure. A total of 30 boys were identified as the lowest 25% of the population who took the Piers-Harris Children's Self Concept Scale from the three participating elementary schools in Alachua County, Florida. The boys were randomly assigned to an experimental and a control group. Each group consisted of 15 boys. The experimental group received the three

experiences in water skiing and self-control. The control group participated in the regular school curriculum.

The first dependent variable, self-concept, was measured pre- and post-test by the Piers-Harris Children's Self Concept Scale. The second dependent variable, behavior, was pre- and post-tested by classroom teachers using the Burks' Behavior Rating Scales.

The results of this study indicate that self-concept was significantly improved in fifth-grade boys following participation in the water skiing intervention. Data analysis showed significant differences in self-concept between the experimental and the control group. Analysis of covariance resulted in a p value of .0002.

An analysis of the teacher ratings of behavior showed that the intervention had the greatest effect on the boys who exhibited the most severe behaviors. Because analysis of covariance was not appropriate for these data, separate regression lines were plotted to help interpret the interaction. The treatment had the greatest effect on those boys who were rated as exhibiting the most negative behavior on the pre-test. Less treatment effect was found among the boys who were rated as exhibiting few negative behaviors.

Although other studies give results suggesting a significant positive relationship between behavior and self-concept, the correlation coefficient analysis indicated that no relationship existed between these variables in this study for subjects receiving the treatment.

The implications of this study are that success in a nonschool related physical activity can improve children's feelings about themselves and alter behavior patterns in a positive way.

CHAPTER 1 INTRODUCTION

Every person lives alone—and it is doubtful that anyone can really know the "self" of anyone else. Through the quest for understanding oneself and others, much of human thought, philosophy, and psychology has been developed. As a child grows and develops, he/she learns about the world and self. Such learning is intensely personal, heavily symbolic, often illogical, and is of vital importance for private happiness and public behavior. It is translated into action by most of the things that one says and does, by the attitudes one holds, and the beliefs one expresses (McCandless, 1967).

Young children form some concept of themselves as people. The self-concept, though essentially private, is influenced and revealed through a person's interaction with others. The psychological construct of the self-concept connotes an area of essentially private experience and self-evaluation. Considerable study on the nature of the "self" and its relation to behavior and adjustment has been done. Studies have provided evidence that self-concept of school children has implications in many aspects of living; it determines the set of expectancies that are held (Marrow, Bowers, & Seashore, 1967; McCandless, 1967; McIntyre, 1952; Roethlisberger & Dickman, 1950). This private experience and self-evaluation are, therefore, considered to be a

learned process that has been shown to influence learning in the classroom and in other areas of their lives. Children who see themselves in a positive manner live in a less threatening world, and more of their school experiences are likely to seem challenging to them. They can risk involvement and find the confrontation of problems rewarding (Combs, Avila, & Purkey, 1971). The studies by these researchers indicated personal fulfillment through growth and accomplishment. Awareness and the capacity to respond are described as the qualities of life itself.

The dimension of self-concept, as seen by McCandless (1967), is a continuum that may vary from extremely poor or negative, to a very good or positive one. The positive dimension of the self-concept, reflected in one's personal and social adjustment, is referred to as "self-esteem." The influence of self-esteem upon success in school has been documented in innumerable studies (Brookover, Thomas, & Paterson, 1964; Coopersmith, 1959; Combs, 1964; Felker, 1972; Hamachek, 1965; Hill & Sarason, 1966; Mossman & Ziller, 1968; Roth & Puri, 1967; Wattenberg & Clifford, 1964; Williams & Cole, 1968). The qualities that contribute to self-esteem produce behavior that is dynamic and striving toward accomplishment.

Felker (1974) suggested that three feelings contribute to self-esteem: (1) feelings that contribute to one's sense of value or worth; (2) feelings that one is a part of a group (belonging); and (3) feelings that accompany a sense of accomplishment. Maslow (1954, 1962) sees this striving toward accomplishment as a constructive force in human

existence. This basic striving of organisms for fulfillment has been called the "growth principle" because the effect is to move a person continuously toward health and growth as long as possible (Tournier, 1957). The growth principle operates in both physiological and behavioral matters; the whole organism strives physiologically and psychologically toward growth (Allport, 1961, 1965). It has also been called by biologists "homeostasis," the wisdom of the body and the drive to health. The fulfillment of self which human beings seek in the expression of the growth principle is actualization of the concept of self. As a consequence, people may strive very hard to gain self-esteem in both the present and future (Combs, Avila, & Purkey, 1971).

Among psychologists the growth principle has been described by Maslow as a need for self-actualization, by Allport as a process of becoming, by Lecky as self-consistency, by Festinger as dissonance reduction, by Frankle as a search for meaning, and by Rogers as a search for self-fulfillment. By whatever name it is called, the principle refers to the striving of all human beings engaged in a never-ending search for personal adequacy or fulfillment. Therefore, the effect of experience on personal meaning begins as early as life itself and continues as long as a person lives; meanings for one person are probably in a continual process of change.

Because of the need to achieve maximum enhancement, the self-concept exerts a most important determining effect upon the richness and extent of meanings. Persons must have in addition, the freedom to develop the capability of self-direction and to make the most efficient

use possible of these meanings. Therefore, restrictions upon this freedom may be impaired less by outside forces than those that have their origins within individuals themselves.

The meanings that one has are the function of one's perceptions of experience. Meanings may be restricting or enhancing. By adjustment of one's perception, things seem to change their properties; experiences or objects that were pleasurable become painful or vice-versa. Instances of extreme martyrdom seem to us superhuman because the mental attitude under the influence of which they become possible, even desirable, has not been experienced by us (Tagore, 1818). By changing the mental focus or perspective, one's view of the world is changed and becomes in certain respects a different creation with different values. Differences exist in how one looks at and feels about oneself and the evaluation of one by others (Combs, Avila & Purkey, 1971).

Children develop these meanings as a result of the importance attached to events and persons. If a child is to learn to attach importance to people and rules, he/she must first find that they are useful, powerful, and associated with both rewards and punishment (McCandless, 1967). The child's own cognitions determine the standards that he/she sets. Of interest to researchers is the manner in which children impose performance standards upon themselves, monitor their own performance, and evaluate and reinforce themselves with respect to their ability to meet these self-imposed standards. The interrelationship between the development of meanings and the self-concept is

manifested in children's behavior and the attitudes they display. Of concern are the ways in which children may be taught to manipulate their own cognitions to control their own behaviors and the ways in which the environment can be manipulated to affect children's cognitions in order to affect self-concept through improvement of self-control (Bandura, 1971; Mahoney & Thoresen, 1974; Mischel, 1972; Thoresen. & Mahoney, 1974).

Writers who have examined self-concept have emphasized these three areas as forming the necessary components in the process of developing self-esteem. Erikson (1963) stresses the development of a sense of feeling of belonging. Diggory (1966) stresses competence and Jersild (1952) stresses worth. Erickson finds it essential that the person perceive himself as an accepted and valued member of the group. Diggory argues that the basis for self-evaluation or behavior is purpose. If one is efficient in accomplishing tasks, one is able to give oneself a positive evaluation. Since one individual can never have exactly the same experience or background, interpretation of experiences is highly personal. Viewpoints can change and when they do, this changes the way an individual looks at the past as well as the present and the future. This potential for change is important for self-concept development.

Based on the theories of these researchers it is accepted that self-concept is learned. Two general conclusions can be drawn. First, people tend to do things which get them what they want. Secondly, people often learn by observation and imitation.

As Jersild (1952) has stated, perception of themselves as being worthwhile in the estimation of others is what makes individuals feel they are worthwhile personally. How others treat an individual as well as what others do for him/her are common expressions of the individual's worth.

Purpose of the Study

The purpose of the study was to measure the effect of a water skiing intervention on school children with low self-concepts. The intervention provided the children with an experience in learning a physical activity unrelated to school. Children who participated in the water skiing intervention were provided the opportunity to experience personal success, when they applied basic elements of learning and self-control. The goal was to develop awareness of the relationship between self-control and success and to promote feeling of esteem in children who characteristically indicate a lack of self-worth.

Through intervention process, the researcher attempted to stimulate more positive attitudes in children and to add new dimensions to their personal meanings and perceptions regarding successful achievement of goals. For a child to learn to trust and respect himself, if he has begun to perceive differently, necessitates that he begin to view himself positively, to feel that he is worthy and capable of achieving success (Felker, 1974).

The researcher evaluated the effectiveness of a water skiing experience on the variables of self-concept and behavior ratings by teachers through pre- and posttesting. The results contributed to

the understanding of the relationship of children's concept of self, their behavior and the achievement of goals.

Rationale for the Study

The rationale for this study was based on Felker's theories that self-esteem develops from feelings of belonging, feelings of value or worth, and feelings of accomplishment. The experimental program was an effort to offer a new and positive experience to children in order to broaden the frame of reference from which they made their observations about themselves and the world around them. If events in a child's life are making him or her feel unable, unwanted, unliked, and a burden to others, and the meanings the child finds in his experiences are distorted by the way he sees himself (Combs, Avila, & Purkey, 1971). Studies of the effect of motor skills activities on growth of self-esteem provide evidence that when children have the opportunity to experience successful control over themselves within the environment, they acquired these feelings of worth (Rudner, 1979; Simpson & Meaney, 1979).

The program was based on the theory (Combs, Avila, & Purkey, 1971) that the most important single factor affecting behavior is the self-concept. Persons with positive views of self tend to behave in ways that result in experiences of success with the world and with the people in it. Self-concept is the screen through which experience is seen, heard, evaluated, and understood, creating a selective effect which corroborates and supports already existing beliefs and so tends to maintain and reinforce its own existence.

Combs, Avila, and Purkey (1971) defend the position that a positive view of self contributes to psychological freedom and provides its possessor with a firm platform from which to deal with life. Because the whole organism strives toward both physical and psychological growth, a positive self-concept promotes a spiraling or circular effect in which success contributes to further success. The circular characteristic of self-concept is observed at work in children who cannot read and are unable to do so largely because they believe they cannot read. This self-perpetuating effect is not limited to success or failure in academic subjects, but extends to all aspects of human experience. When a child fails, he has a different perception of his attributes and competence from the child who has success without apparent effort.

The program described in the following chapters includes a physical activity experience which provides children with success through employment of self-control. A water-skiing intervention was the specific approach for the study. Success and self-control increase the child's awareness of the power of his own personal effort and the value of self-control. The importance of effort and self-control is emphasized in an accepting environment in which there has been no previous failure. The children receiving the intervention were expected to increase their ability to control their own behavior and through success and personal growth promote a more positive self-concept.

Definition of Terms

For the purpose of this study the following definitions were applied.

Self-concept is a construct including all those aspects of the perceptual field to which we refer when we say "I" or "me." It is the sum total of the organization of perceptions about self which seems to the individual to be who he/she is, the frame of reference from which his/her observations are made, personal reality, and the vantage point from which all else is observed and comprehended. As the self-concept changes, what one believes to be true changes with it. Once established, the self-concept provides a screen through which everything else is seen, heard, evaluated, and understood.

Low self-concept is the self-report results on the Piers-Harris Children's Self Concept Scale that places the child in the lower 25% of his class.

Physical activity is a guidance approach to water skiing.

Self-esteem is the characteristic of accepting oneself in essentially positive ways. Authors who have written about the nature of self-actualization describe such persons as possessing a high degree of self-esteem or self-acceptance. Studies of self-accepting persons suggest that these persons see the world as a friendlier and more benign place than do self-rejecting individuals.

Self-control represents a situation in which there is a high probability that the person would behave inappropriately for the situation, but instead behaves appropriately (a behavior of lower probability of occurrence).

Organization of the Remainder of the Study

The purpose, theoretical rationale, need, and definition of terms were presented in Chapter 1. A review of the literature focusing

on the construct of self-concept and the influence of self-concept on achievement and success is presented in Chapter 2. In Chapter 3, the experimental hypotheses are listed, the experimental design and intervention procedures are described, and research in regard to criterion instruments is discussed. The results of the study are reported in Chapter 4. Chapter 5 includes discussion of the results, limitations of the study, and recommendations for further research.

CHAPTER 2 REVIEW OF THE RELATED LITERATURE OF SELF-CONCEPT

The review of the literature can be divided into four major areas. First, the nature and etiology of the construct of self-concept is discussed. This section includes reference to principal investigators and the development of ideas about the self by these investigators.

The second major area examines the research on self-concept and the relationship to achievement of goals. In this section findings of researchers who have studied school success and self-concept are presented.

The third section examines the theory and research relevant to the role of self-concept and presents findings that support the belief that one's inner speech may be one way of connecting internal self-concept with an external activity if the statements are vocalized. The literature reviewed supports the predictive relationship between positive self-language and positive self-concept. The experimental program is based on the premise that by providing direct experience with directive and reinforcing inner speech and success in a new and exciting learning activity, self-concept can be changed. It is believed that to integrate the successful learning component and its self-concept enhancing qualities with the development of strategies of self-reinforcement, the effect must be a powerful enough agent of change to promote the academic success of the participants.

The fourth section contains the review of literature of self-control.

The Nature and Etiology
of the Construct of Self-Concept

Early in the history of psychology, the philosopher/psychologist William James (1890) attributed to the ego the individual's sense of identity and considered the perceptions which an individual had of himself as an important variable in understanding human behavior. James believed that, whenever two people meet, there are really six people present—there is each man as he sees himself, each man as the other man sees him, and each man as he really is. The development of self-esteem is based primarily on the way individuals see themselves and whether the view each has of himself is positive or negative. The basic questions are, Does he think well or badly of himself? (Felker, 1974).

Sigmund Freud's work added the dimension of dynamics to the ideas of the "self." In Freud's sense the ego is similar to the idea of self-worth with an emphasis on the dynamic, directing qualities of the self (Freud, 1962). Developing from the Freudian approach, psychodynamic theorists see the ego as the efficient organizer and maintainer of balance (Lowe, 1961). The personality systems represent dynamic energy systems operating within the individual.

Another group of theorists have approached self-concept from a humanistic point of view. Based on the assumption that man strives naturally for those things most conducive to growth and self-fulfillment, these theorists perceive the individual as having a basic tendency to strive, to actualize, and to maintain and enhance oneself. According to

Rogers, the individual who develops a self which is uniquely his own is a fully functioning person. Within this process, the individual moves from facades and external evaluations and motivations to a greater awareness of and dependence upon the internal self as an evaluator and motivator (Rogers, 1951). Persons and groups in a climate of understanding and genuineness move away from rigidity and toward flexibility, away from dependence toward autonomy, and away from defensiveness toward self-acceptance.

A contemporary of Rogers, A. H. Maslow was primarily concerned with "self-actualization," that is, the process of becoming what one has the potential to become. His ideas dealt with a theory of motivation which postulated that individual needs are arranged in a hierarchy. Within the hierarchy of five basic needs, only physiological needs and safety needs precede the need for love and belonging and the subsequent need for self-esteem (Maslow, 1954). Maslow, in his theory, described an inborn motive to develop one's potentialities (self-actualization).

In 1952, Arthur Combs suggested that one's perceptions are so important that they could even affect one's level of intelligence and speculated that what one learns may be related to what he perceives himself capable of learning. He stated further that it seemed necessary to evaluate development or achievement in light of the child's previous opportunity to perceive or lack of opportunity, as for example the child who over a long period of time has been so threatened as to have been unable to perceive positively.

By adjustment of one's mental attitude, things seem to change their properties; experiences or objects that were pleasurable become

painful or vice-versa (Tagore, 1918). Consequently, by changing one's mental focus or one's perspective, one's view of the world is changed and becomes in certain aspects a different creation with different values. Differences exist in how one looks at and feels about oneself and the evaluation of one by others (Combs, Avila, & Purkey, 1971).

An example of this discrepancy is cited by John F. Kennedy in his book Profiles of Courage. Kennedy described John Quincy Adams as a man who held more important government offices than anyone else in the history of the United States. His distinguished service included the Presidency, the Senate, Congress, minister to major European powers, participation in various capacities in the American Revolution, the War of 1812, and events in the Civil War. Yet at the age of 70 he described his whole life as a succession of disappointments. He stated that he could scarcely recollect a single instance of success in anything that he ever undertook (Kennedy, 1976).

Individuals perceive themselves as more or less competent or acceptable, a set of personal beliefs that does not necessarily correspond with how others see them. All individuals have areas of thought and feelings about themselves which are unique to them and different from the thoughts that others have about them. The unique set of perceptions, ideas, and attitudes which an individual has about himself is included in the construct of self-concept.

The word "self" has been used in many different ways. Some theorists have suggested that "self" can be dichotomized into that which

refers to the "self" as agent or process and that which refers to "self" as object of the person's own knowledge and evaluation. In the second category, knowledge and evaluation of one's own characteristics or states may be available to one's conscious awareness, or may be partially or entirely unavailable to awareness (Hall & Lindsey, 1970; Symonds, 1951; Wylie, 1974).

Attributed to the "self as object" category are active, behavior-influencing characteristics such as the usage of self-referent constructs, or inner language; it seems a more active role than the phrase implies. Some personality theorists, however, suggest processes which seem to refer to self as agent or self as object, but which go beyond both senses and are not clearly related to either. For example, Maslow (1954) postulates an inborn motive to develop one's potentialities and that growth tendencies of the self are present in everyone (Wylie, 1974). These active behavior-influencing characteristics and the role of language are discussed later in the chapter.

Bertocci (1945) described the ego as having its own possessions and being itself possessed. This sense may be called the objective sense. It is the object of knowledge, of striving, on the part of a knower, striver, feeler, and purposer. It is the development by something and "in" something; the ego itself is a development in that it changes. Bertocci suggests a psychological agent whose activities endure throughout changes in egos, personalities, and all other experiences which are identified as "my" or "his" experiences. The "I" is never completely exhausted or absorbed in any one adjustment. He

suggests that "I" refers to a complex, unitary activity of sensing, remembering, imagining, perceiving, wanting, feeling, and thinking, the dynamic unity referred to by the word "self." The activities are distinguishable aspects, not distinct parts of the total unitary activity of what he calls the psychological self.

The Relationship between Self-Control and Achievement of Goals

Felker (1974) pursues the idea of self-concept in terms of three main factors: perceptions, ideas, and attitudes, the sum total of the view an individual has of himself.

Self-perception, from Felker's point of view, refers to the sensory data that are received from the environment. Much of the sensory data is about the self, and when it is about the self, it is unique to the individual, forming the basis for the ideas and attitudes which an individual has toward the self.

Self-ideas or ideas and attitudes people have about themselves are also unique and are central to the "self-concept"; they define the self in terms of who and what. The meanings attributed to sensory data are the conclusions that people come to about themselves from perceptions of their environment. As meanings become definite ideas, they operate to define, and in turn give meaning to new data which is received, and the whole process becomes circular. Nothing is received in an uninterpreted way and what is received is incorporated into the whole set of self-referent ideas which the individual has developed.

The factor of self-attitudes, or the sum total of it occupies the dual role of both having and receiving. The perceptions which are

received from the environment are the foundation from which ideas and the resulting internal thoughts about self are developed. Consequently, attitudes develop from internal thoughts and are aimed at the self. Because self-attitudes are directed inward, the emotions aroused by these attitudes cannot be avoided. Freud's defense mechanisms, as both Murphy (1974) and Allport (1961) observed are primarily designed to maintain a favorable self-concept. Negative attitudes must be dealt with in some way. The necessity of maintaining harmony may result in the refusal of the individual to accept as valid things which others observe about him/her. Although individuals may defend themselves against negative attitudes of others by rationalization, one cannot avoid being aware of oneself (Felker, 1974).

The role of the self-concept is threefold. The self-concept operates as a mechanism for maintaining inner consistency; it determines how experiences are interpreted, and it provides a set of expectancies. Each of these three rules is a powerful determiner of behavior.

First, the maintenance of inner consistency refers to the harmony or "dissonance" (Festinger, 1957) that one experiences. There exists a strong motivation to be comfortable, and if a psychologically uncomfortable situation exists, one is likely to take any sort of action that will restore a more comfortable condition (Lecky, 1951). What an individual thinks about himself is a vital part of internal consistency. Essentially it is not so much whether things are actually different, but that dissonance is caused when an individual sees two things as being different. The individual behaves in ways that are consistent with the ways he sees himself.

Second, the interpretation of experience shapes the way in which the individual interprets the events which he experiences. Every experience is given meaning. Exactly the same thing can happen to a group of people, but each will interpret it from his/her own frame of reference. Since any action can be interpreted either positively or negatively, a negative pattern can develop which is extremely difficult to change.

Third, the self-concept's power and influence determines what the person expects to happen. According to McCandless (1967), the central facet of self-concept is this set of expectancies plus the evaluations of the areas of behaviors with reference to which these expectancies are held. These self-fulfilling prophecies operate to determine how one is going to act.

It is well established throughout the literature that a positive correlation exists between self-concept and academic achievement (Purkey, 1970; Wyley, 1961). This has been consistently found for early elementary school children (Wattenburg & Clifford, 1964), intermediate elementary children (Williams & Cole, 1968), and high school students (Shaw and Alves, 1963). The relationship is found in both black and white populations and in groups with learning problems of a serious nature (Caplin, 1969; Gorlow, Butler, & Guthrie, 1963). Combs, Avila, and Purkey (1971) describe a positive self-concept as having vital effects on a person's efficiency, as well as on his freedom to confront new experience. With greater feelings of certainty about themselves, people can trust their impulses more and view themselves as

dependable. This assurance-producing quality of a positive self-concept is observable in school children's perceptions of how to handle potential academic failure. Successful children with positive self-concepts report engaging in constructive strategies such as increased studying or practice and asking for help, while unsuccessful, low self-concept children regarded the same situation as hopelessly insoluble and could suggest no constructive strategies.

The philosopher, Schlick (1939), based his system of ethics on the proposition that all humans are motivated to do pleasurable things. Horowitz (1967) found scientific evidence that social responsiveness can be a powerful influence on learning. People repeat behaviors that get positive responses and eliminate behaviors that get punishing responses. Neutral responses depend upon other activities in the environment to determine the probability of repetition. Frequently individuals repeat behaviors when there is no apparent reinforcer. White (1959) explains that there is something pleasurable in learning. Being able to do something new can serve as reinforcement. Children frequently find pleasure just from doing a newly learned behavior.

The relationship between self-concept and academic variables also can be explained by the rationale that the low self-concept is due partly to an inability to self-administer verbal reinforcements. Researchers have found that low academic achievement and underachievement are related to low self-concept (Brookover, Thomas, & Patterson, 1964; Coppersmith, 1959; Fink, 1962; Wattenburg & Clifford, 1964). It has been shown, on the other hand, that reinforcement and self-reinforcement

are positively related to performance on academic tasks (Felker & Thomas, 1971).

Research has also supported the hypothesis that self-concept is related to other characteristics. The relationship between negative self-concept and high anxiety has been well established in populations that are widely different in both age and geographical area (Felker & Stanwyck, 1971). This relationship is confirmed even when the anxiety measure is a more specific measure such as test anxiety (Lekarczyk & Hill, 1969; Sarason & Koenig, 1965).

Self-Concept and the Role of Self-Referent Language

Language is the central factor in the development of self-concept (Felker, 1974). McCandless (1967) states that the development of real language at the approximate age of 18 months to two years is the beginning of the self-concept. The term "concept" assumes the attachment of a name to something which encompasses a number of variables, some of which distinguish that thing from other things. The development of the self-concept entails the attachment of the term "self" or "me" to the set of characteristics that distinguish "me" from other things and persons in the environment. The role of language is crucial in formulating this concept.

The role of language carries other important dimensions for the self-concept. Kohlberg, Yeager, and Hjertholm (1968) have pointed out that acquiring internal direction is a developmental process that increases the individual's control over behavior. The process of giving self-rewards, including verbal self-rewards, has an effective influence

on behavior. The individual develops a pool of statements for self-reference. If these are negative statements, the person will say predominantly negative things to himself about himself. Marston (1965) found that this use of internal language may be one way of connecting internal self-concept with an external activity if the statements are vocalized. Felker and Thomas (1971) have found the relationship of positive self-language is predictive of positive self-concept. Statements which children choose as reinforcing to say to themselves have been found to be related to general self-concept (Felker & Stanwyck, 1971), and have been found to have a stronger relationship than performance alone (Felker, 1972). The fact that children learn the word "bad" as one of the first self-evaluation terms indicates that much of the social environment is designed to teach the children self-derogation rather than self-esteem (Rhine, Hill, & Wandruff, 1967).

The counterpart of an adult who gives a child vocal encouragement may be self-directed speech. It has been established that private speech or inner speech can be learned by the individual to direct behavior in terms of telling oneself what to do (Kohlberg, Yeager, & Hjertholm, 1968; Piaget, 1926). Children often talk aloud to themselves, but as they grow older, this self-directed speech becomes internalized. When children have built positive verbal reinforcement into their own behavior, they maintain their own learning by constantly reinforcing themselves when they accomplish what they set out to accomplish, thereby reducing their need for teacher encouragement (Felker, 1974).

The role of inner speech and self-referent language also provides a crucial insight into self-concept. Jersild (1952) developed a collection of statements that people gave to describe what they liked or disliked about themselves. His work has been used as a source for self-concept items such as are included on the Piers-Harris Self-Concept Scale (Paris & Harris, 1964). The statements include

It is hard for me to make friends.

It is usually my fault when something goes wrong.

I am smart.

I have good ideas.

I am often sad.

I do many bad things.

I am good in my school work.

It is postulated that the child who has a positive self-concept has learned to give himself positive self-referent verbal feedback and that the child who has a negative self-concept has probably learned to give himself negative verbal feedback, or he has not learned self-referent language and, therefore, does not give himself much feedback at all.

Marston suggests that self-reinforcement or positive internal language can provide a bridge between self-concept and learning (1965). This link also indicates the connection between related variables in self-concept and learning (Felker, 1970). The relationship between positive self-concept and low anxiety has been widely verified. If

negative self-concept is due partly to a lack of learned ability to give positive verbal reinforcement, an individual in an ambiguous situation is at a disadvantage because he is dependent upon outside forces for reinforcement.

An individual can never be certain whether others in the environment are going to give reinforcement in any given situation and if others are the only source of reinforcement, such an instable contingency can result in an anxiety-producing situation. Felker (1970) found that low self-ratings and low peer ratings interact in a relationship with high anxiety, in keeping with the idea that ambiguous sources of reinforcement can be a cause of anxiety. Self-referent praise and self-reinforcement are behaviors that can be developed toward the goal of changing a feeling or perception and has a more lasting result than mere manipulation by others on whom the child will continue to depend for reinforcement (Felker, 1972).

J. C. Diggory (1966) approached self or self-concept by focusing on the cognitive dimensions of self and placed primary emphasis on the way in which individuals evaluate themselves. The self is characterized by relationships in which the individual is both the subject and the object. In his research on self-evaluation, Diggory has placed emphasis on competence as an aspect of self-esteem and showed that areas of self-concept can be investigated scientifically. The cognitive approach appears to hold promise for developing more detailed explanations of the mechanisms by which self-concept is developed and maintained.

Although there are situations in which individuals should dislike some of their behaviors and reactions, the general evaluation

an individual makes of himself should be positive. The inability of children, who have negative self-concepts, to be successful and to operate well in life is one of the pressing problems of teachers.

Felker (1974) describes self-esteem as either a product or a process. As a product esteem means high regard or a favorable opinion. As a process esteem means to regard with respect or affection, to set a value on, and to rate highly (Albee, 1963). Children should emerge from the process of self-esteem with a generally favorable opinion of themselves. The emphasis must be on how self-attitudes develop and change and on how children develop the skills necessary to regard themselves with respect. Feelings that contribute to self-esteem fall into three categories: (1) the feelings about oneself that center around times and experiences during which one feels a part of a group; (2) the feelings that have to do with times that one feels a sense of accomplishment; and (3) the feelings that contribute to one's sense of value or worth.

Review of the Literature of Self-Control

In the past twenty years extensive work has been done in the area of behavior modification which has led to the development of principles aimed at predicting, understanding, and controlling human behavior. Much debate has accompanied this research as to the ethics involved in the issues of who should apply controls to whom and whether control should be deliberate and constructive or remain random and possibly harmful. Several researchers found a solution to the problem by providing the individual with skills that he himself could apply in

changing his own behavior. Studies by Mahoney and Thoresen (1974) have demonstrated that given the necessary knowledge, an individual can accomplish changes as well as, if not better than, an external behavioral designer.

The individual also has more access to the responses to be changed (particularly if they involve such factors as thoughts) and may be capable of applying behavior change procedures over a long period of time. This concept has the added strength of implying a more active role on the part of the individual in arranging and regulating the environmental forces. Behavior is seen as a function of its environment, which may be rearranged and altered. Skinner (1953) distinguishes between controlled responses (such as cigarette smoking) and controlling responses (such as refusing to buy cigarettes). These "self-controlling" responses must be reinforced (for example, by improved health or social praise) or they will decrease in frequency. The complexity and interdependency of behavior-environmental influences that make up the phenomenon of self-control are a challenge to the researcher. Evidence has accumulated to indicate that effective self-regulation can be durably established if attention is given to a significant person-environment relationships. Based on their previous studies, research by Mahoney and Thoresen (1974) pointed toward the possibility of creating a "technology" of behavior self-control, i.e., a set of procedures that the individual can learn to use in directing and managing his own internal and external actions.

Meichenbaum and Goodman (1971) investigated the modification of problem-solving styles of impulsive children using covert speech as a

self-guidance procedure and found that children given verbal self-instructional training performed more slowly on the posttest than the control group. Children who received modeling plus self-instruction training made fewer errors than either the control group or the group for whom the task was only modeled.

Mischel (1974) has done a great deal of work to establish the position that attention is an important determinant of self-control. Children as young as pre-school age were taught to manipulate their attention in ways that affected their self-control. Mischel and Ebbeson (1970) and Mischel and Moore (1973) demonstrated that when pre-schoolers were just instructed to "think" about rewards (even when the rewards were not present) and wait for a more desirable reward, they exhibited increased self-control in delay of gratification situations.

Research has not been limited to this country. Early studies by the Soviet researcher Luria (1959, 1961, 1969) provide controversial data on the age at which verbal control is first in evidence in young children. According to Soviet theory, children are not always able to control their behavior by verbal self-instruction. Children 1.5 to 3 years old did not benefit from an instruction to instruct themselves verbally. Between the ages of 3 to 5.5 years children were found to be able to exercise some verbal control over motor behavior if instructed. Without instruction (according to Luria), the pre-school children persevere because they do not realise that they have completed the required motor response. The feedback mechanisms are not

mature enough to provide the feedback necessary for control. In order to inhibit a motor response it is necessary to supplement the response with a signal that the response has been executed. According to the research any discrete speech signal works (e.g., counting) (Luria, 1969; Tikhomerov, 1976; Yakovleva, 1976). Further discussion of these results and references to the primary sources are available (see Pressley, 1979).

The Soviet research has triggered numerous studies that attempted replication. Birch (1971) argued that there is a period of development during the early school years when children cannot coordinate and/or simultaneously produce speech with another activity. Birch reported that children younger than four years of age experienced more difficulty coordinating verbal and motor response than did older preschool and school-aged children.

Other studies present evidence to the contrary. In Golden, Montare, and Bridger (1977) two-year-olds were taught to inhibit motor behavior that required "delay, then act" response sequences 50% of the time.

The studies of verbalization effects (such as Bain, 1976; Golden, Montare, & Bridger, 1977; Meacham, 1973) have revealed that there are interesting developmental constraints on the verbal control of motor behavior. However, there is evidence that relevant verbalizations, either self or externally produced, can increase children's motor control (Bem, 1967; Meacham, 1973; Meichenbaum & Goodman, 1971).

Pressley (1979) stated that what is needed is for someone to study self-verbalization in school-age children in the same analytical

fashion that Mischel and Patterson have studied the controlling effects of self-verbalization in preschool children.

The type of rationale which is provided to children has been shown to be a determinant of effectiveness in laboratory studies and the effectiveness of some types of rationales changed with age. According to Parke (1974) rationales which emphasize physical consequences of acting in an uncontrolled manner increase the self-control of preschoolers, elementary school aged children and adolescents. Fear-based rationales (I will be angry with you . . .) are effective with children three to eight years old, but rationales that orient the child to the rights, properties, and feelings of others become increasingly potent with increasing age (Jensen & Buhanan, 1974).

It is reasonable to argue that more sophisticated rationales increase in effectiveness with increasing age of the subjects and presumably increasing cognitive development level.

According to Piagetian theory (Piaget, 1971) young elementary school age children pay more attention to the consequences of actions than the intentions of actions, but the trend is reversed as children approach adolescence (Pressley, 1979). Consistent with Piagetian theory La Voie (1974) found that between seven and eleven years of age a rationale which emphasized the intentions to deviate, e.g., the child's self-instruction "it is wrong to want to play with that toy" was increasingly effective with increasing age. This study demonstrated that rationales can affect self-control in this age when the rationales are congruent with the subjects' cognitive level.

Pressley emphasized that a striking aspect of the literature on cognitive effects in resistance to temptation tasks was that few of the studies were conducted developmentally. He stated further the importance of researching the use of these strategies by children spanning a wide age range, because it was certain that some of the strategies worked better at some age levels than they did at others, e.g., the selective attentional strategies. Piaget and Inhelder (1971) stressed that the ability to generate mental images undergoes development and thus it could be expected that children's ability to benefit from attention-development strategies would also undergo development. It might be that trying to imagine a wall between themselves and a distractor (Patterson and Mischel, 1975) would not be appropriate for children younger than five years of age.

Other interesting questions arose concerning Masters and Santrock's (1976) work demonstrating that positive affect induction produced greater self-control. They demonstrated that contingent positive self-produced affect could act as a reinforcer for ongoing activities, e.g., persistence on a dull task, and that negative, self-produced affect could act as a punisher. It may be that positive affect may increase one's expectancy for obtaining the delayed reward, or may increase the subjects' feeling that they are capable of waiting for a reward. Pressley (1979) suggested that much more research should be conducted in classrooms to determine if the strategies discussed here can be used to affect children's self-control in meaningful situations.

The applicability and transfer of these techniques to the classroom environment have been examined by several researchers. Lovitt and

Curtiss (1969) found higher group studies of self-control to be possible in settings such as classrooms and that young children can learn to observe and reward their own behavior. Submanagement techniques were found to be as effective as procedures controlled by others.

Researchers have often used visual discrimination tasks such as the Porteus Maze and the performance subtests of the WISC-R when investigating impulsive children's information processing. Impulsive children spend less time and make more errors than normal children and do not look as long at alternatives as do reflective children, nor do they look at as many alternatives (Ault, Crawford, & Jeffrey, 1972).

Bugenthal, Whalen, and Henker (1977) reported that verbal self-instruction training improved the Porteus Maze performance of hyperactive seven- to twelve-year-olds, but only for boys who believed that they could control their lives; i.e., they believed that their own efforts better predicted performance on a task than teacher biases about their behavior or luck. Thus, Bugenthal et al. (1977) presented evidence that the effectiveness of verbal self-instruction is dependent on personality characteristics of the user. Additional research should be conducted to determine the individual parameters associated with verbal self-instruction benefits.

Essential to the ability to regulate one's own behavior is the adequate knowledge of and control over existing environmental factors, as well as the recognition of the cues and consequences which assist the individual in knowing what factors influence behavior, and how those factors can be modified to produce the desired behavior change.

According to Mahoney and Thoresen (1974) the essential components for studying self-control identified by research are self-observation, environmental planning, and behavioral programming.

Directly linked to the idea of self-control through personal effort is the individual's perception of his effectiveness, i.e., individuals who report (on a given scale) that they perceive events as being largely contingent upon their personal efforts at the present time as opposed to those who feel more fatalistic about the manner in which outcomes occur. As a result they differ on any number of associated dimensions. Rotter (1954, 1960, 1972) has investigated this concept of perceived control and presented a large body of empirical evidence developing the concept that an individual's expectancy of success in obtaining reinforcements (freedom of movement) is based on the result of his previous attempts to obtain desired reinforcement. Lefcourt (1976) defines perceived control as a generalized expectancy for internal as opposed to external control of reinforcements. "Like freedom of movement, it [perceived control] is an abstraction deriving from a series of specific expectancy behavior-outcome cycles . . . the generalized expectancy of internal versus external control of reinforcement involves a causal analysis of success and failure" (Lefcourt, 1976, p. 27). Individuals develop habitual interpretations of failure and/or success which may differ from person to person. Success will not necessarily be interpreted in a similar way by different persons. People do not just register success or failure, but the interpretation of the causes of these experiences. Rotter

(1966) states that these generalized experiences will result in characteristic differences in behavior in a situation. His research explores the manner in which internal cognitive processes interact. For example, a child may be described as not assimilating new learnings if action-outcome sequences are perceived as being non-contingent; that is, he will not learn from his experiences unless he believes that these experiences are lawfully related to his own actions. If events are only randomly paired there would seem to be little reason for attending to them with an intent to learn. Rotter (1966) concludes that the readiness to perceive contingency between one's actions and outcomes is an essential element in understanding how man comes to terms with his daily experience. Some individuals develop the belief that valued reinforcements occur only by chance. In contrast others strongly believe that humans get what is due to them and are responsible for their fates. Persons with such opposing perspectives differ considerably in the degree to which they are able to accumulate and learn from their experiences.

Numerous studies have examined various implications of the locus of control dimension. Several researchers investigated individuals' resistance to conformity and the personal characteristics that contribute to compliance or independent judgment using data from choices made by subjects on the Rotter I-E Scale, Barron's Independence of Judgment Scale, and Asch's Conformity Tasks. Odell (1959), Crowne and Liverant (1963), Ritchie and Phares (1969), and others discussed by Lefcourt (1976, pp. 40-49) find consistent evidence that persons with an internal locus of control respond positively to reasoned arguments

regardless of the source and which seem congruent with their own perceptions and choose active participation and self-direction. Externals on the other hand appear more responsive to the status of the influencer and more readily accept directions and suggestions of an experimenter. Lefcourt states that insofar as the researcher is perceived as a legitimate authority, defiance against his requirements can be taken as the readiness to resist authoritarian dictates. The relationship between locus of control and resistance to influence has been extended to moral decision making in studies of cheating (Johnson and Gormly, 1972), and tolerance of discomfort in doing what is considered "correct" (Johnson et al., 1968). The data suggest that cognitive differences exist between internals and externals that account for such differential responses to pressures. Lefcourt (1976) emphasizes that internals have been found to be more perceptive to and ready to learn about their surroundings. They are more inquisitive, curious, and efficient processors of information than are externals. Externals appear to lack the cognitive processes that would enable them to examine and evaluate their choices and decisions, or even to see that the choices are available. It becomes apparent that locus of control plays a mediating role in determining whether persons become involved in the pursuit of achievement.

The link between locus of control and cognitive activity appeals to common sense in the suggestion that a disbelief in the contingency between one's efforts and outcomes should preclude achievement strivings. Without an expectation of internal control, persistence

despite imminent failure, the postponement of immediate pleasure, and the organizing of one's time to efforts would be unlikely (Lefcourt, 1976).

During the 1960s personality characteristics relevant to scholastic success began to receive extensive attention. Previously failure in scholastic achievement was most commonly attributed to a low level of intelligence and success to a high level. Social changes of the 1960s focused attention to disadvantaged and minorities and created public awareness of the extent to which various ethnic, racial, and cultural groups differed in their perceptions of many social institutions. The Coleman report (Coleman, Campbell, Holson, McPartland, Mood, Weinfeld, & York, 1966) directed this attention to the personality characteristics among the disadvantaged which limit or predict their achievement potential. Of significance were the findings concerned with expectancies for control. Achievement was found to be best predicted by a measure of the child's belief that academic outcomes were determinable by his own efforts.

Many studies add depth and breadth to the predictions of achievement-related behavior. The ability to defer gratification, i.e., self-inflicted deprivation, the ability to pursue distant goals despite temptations, the awareness that one's own efforts can forestall failure and the ability to maintain the tension generated by the postponement of immediate need satisfaction are characteristics presented as a result of findings from a series of investigations (Bialer, 1961; Erikson & Roberts, 1971; Mischel, Zeiss, and Zeiss, 1974; Strickland,

1972). Although the empirical data are not without paradoxical inconsistencies and failures at replication, research findings indicate that the engagement in achievement activity or long-range skill-demanding tasks is unlikely if one views himself as being at the mercy of capricious external forces. The choice to engage in achievement activity is mediated by internal variable factors, such as effort, which generates positive feelings, and persistence, despite failure to persevere.

Fortunately, research has revealed that locus of control scores assessed by various scales and/or behavioral means are susceptible to influence. People change in their customary causal attributions if they encounter experiences that meaningfully alter the contingencies between their acts and perceived outcomes. De Charms (1972) established training programs specifically aimed at encouraging children to recognize and rely on personal causation. Children were helped to (1) determine realistic goals, (2) to be aware of strengths and weaknesses, (3) to determine the concrete action that can facilitate reaching a goal, and (4) to consider how to evaluate whether the action is having the desired effect. De Charms (1971) found that experience in positions that allow effectiveness increases internality. To be able to help others is, in a very real sense, being effective, and this researcher found that the learning of skills which enable a person to become an effective helper should result in a greater sense of control.

From the research reviewed it can be concluded that action-oriented therapies which stress the learning of and effecting of contingent results seem to be the optimal approaches for changing clients' perception of causality. Lefcourt (1976) suggested a need for continual research in this area.

The most recent review of the literature by Thomas (1980) examines the interrelationship of student self-management behaviors, academic motivation, and basic skills achievement. Results from recent training studies in self-management, attribution and achievement motivation are presented by the author who finds that large-scale studies of teacher effectiveness seem to confirm the theory that structure, control, and direct instruction are associated with gains in student achievement. He reports findings of a general dissatisfaction with the innovative programs and methods popularized in the 1960s. The "new permissiveness" embodied in many school practices has been seen as a factor in the declining test scores, disruptive classrooms, poorly disciplined students, and uneducated high school graduates. Thomas cites studies that reveal the most dominant correlate of achievement to be the extent to which a teacher or instructional program insures maximum student time on task.

Thomas cites evidence from recent research on self-management and motivation that presents some important qualifications for the view that an effective "back to basics" movement requires a return to traditional teacher-centered structure and control, and an end to permissive practices. He finds two general conclusions as the basis for these qualifications.

The first conclusion is that provided systematic procedures accompany a structured curriculum, student-managed instruction rather than teacher imposed control produces a more effective and individualized control of achievement-related and achievement-disrupting behavior, a heightened sense of personal agency and the possibility of a continued motivation to learn.

The second conclusion is that the extent to which teacher-centered and controlled classrooms are characterized by external rewards, norm referenced achievement standards, competitiveness, uniform goals, and an emphasis on achievement rather than effort, the result for some students is a depression of the affective and motivational prerequisites of academic achievement. Environments that allow students to set their own standards, emphasize the relationship between effort and achievement, and promote the use of student-generated incentives seem not only to produce the greatest long- and short-term achievement gains, but also are associated with a heightened sense of personal achievement among students.

The inference made is that the link between motivation-related behaviors and learning-related behaviors may be a conditional one, so that students who have accepted or been given the responsibility for the management of their own learning may be more apt to discover and use learning strategies on a particular task. They are more likely to exhibit meta-cognitive behaviors, i.e., to think about thinking, and to decide for themselves how and when to store and retrieve information. On the other hand, students who do not have experience in managing their

own behavior, and who have not learned to take responsibility for success and failure do not see any connection between effort and success on a learning task.

CHAPTER 3 METHODOLOGY

Overview

Children who are not achieving success in school may view themselves as unworthy. Their self-concept may be lower than that of other children who are experiencing school success. This researcher focuses on an intervention process that gave non-achieving children an opportunity to succeed in a non-school related activity. The purpose was to measure the effect on self-concept and negative behavior patterns.

This chapter presents the experimental hypotheses investigated and the research design implemented. The population and sampling procedures are described in terms of reliability and validity. Finally, this chapter discussed the analysis of the data.

Assumptions and Hypotheses

This research was an effort to examine the effect of water skiing as an intervention in improving the self-concept of fifth-grade boys and ratings of their behaviors by their teachers. Learning to kneeboard and to water ski introduced the child to a new experience in which the relationship between self-control and success was clearly evident. The questions which were addressed were whether boys who participated in the intervention showed more gain in self-concept than the control group and/or whether teachers perceived their behavior as

improved more than those in the control group. Instruction in water skiing was based on a guidance model.

The control group was in the regular classroom and participated in the usual curricular activities.

The following null hypotheses were tested at the .05 level of significance:

Ho₁: There will be no significant difference between subjects participating in the water skiing program and the control group in reported self-concept as measured by the Piers-Harris Children's Self-Concept Scale.

Ho₂: There will be no significant difference between subjects in the experimental and control group in the teachers' reports on behavior before and after the intervention.

Ho₃: There is no relationship between self-concept and teacher ratings of behavior before or after the intervention.

Subjects and Selection

For this investigation 30 boys, who rated themselves on the Piers-Harris Self-Concept Scale for Children as exhibiting those characteristics indicative of low self-concept, were selected from among 120 fifth-grade students in Alachua County. The population selected for the experimental and control groups were the 30 boys who

scored below the 25% level on a standardized self-concept scale. The table of random numbers was utilized in the assignment of subjects to either the experimental or the control group.

Setting

The two schools from which the boys were chosen were public elementary schools located in the eastern part of Alachua County, Florida. Both schools have a black/white ratio of approximately 65% white to 35% black in the student population. The schools draw from similar low to middle socioeconomic areas. Both schools have a full-time guidance counselor.

The pre- and post-testing were conducted within the school setting by the guidance counselor. Children who were by necessity excluded from the study were those who already knew how to water ski or those who expressed a strong dislike or fear of water.

The water skiing training was conducted at the nearby ski school. The ski school was an established training center serving an international and nationwide clientele. Equipment of the highest quality and meeting the strictest safety requirements was used. The instructor had 20 years of competitive skiing and instructing experience as qualification for this experiment.

The control group participated in the regular school program under the direction of the classroom teacher.

Water Skiing Training

In this program the children in the experimental group received training in a physical activity and participated in kneeboarding and

water skiing activities. While expected to be highly motivating, the experiences also required the child to deal with factors requiring such inner resources as self-control, courage, and belief in oneself. As well as providing an opportunity to experience success, the experience was expected to contribute to the child's awareness that through his own effort he had the power of self-control in a strange and possibly threatening environment. In addition, it was expected that identification as a water skier could give him a sense of belonging to a group proficient in a sport. The sense of accomplishment and feeling of belonging were factors that were expected to promote a sense of value and worth.

For a child accustomed to feelings of failure, being successful in such a seemingly challenging and novel situation was expected to help the child experience the world as less threatening and to develop the courage to meet experiences in life as a challenge rather than as a threat. Success could provide the impetus for a reevaluation of self-worth within the context of personal meanings. By becoming aware of his personal commitment, success was attainable. The child alone was responsible for his success in this previously unexperienced situation. As a result he may choose to risk involvement in other aspects of life and confront daily tasks with assurance rather than avoid them with a "can't do" attitude.

In this program, the degree of success was not dependent upon level of skill development. The child's first time on the water with the kneeboard, since this was immediately successful and reinforcing, provides the necessary sense of accomplishment. In this sense the

experience was different from a school setting in which the curriculum was controlled and children observed their progress in terms of comparison with other children.

It was expected that if the child experienced success, acceptance, and respect in any area of his environment, he would respond in turn with dignity in other areas. Whatever prompted self-esteem or self-integrity encouraged psychological freedom and the likelihood of effective learning in the school environment.

Instrumentation

The Piers-Harris Children's Self Concept Scales

The Piers-Harris Children's Self Concept Scale entitled "The Way I Feel about Myself" was designed primarily for research on the development of children's self attitudes and co-relates of these attitudes. Administered in group form it requires approximately a third-grade reading knowledge. The original pool of items was developed from Jersild's (1952) collection of children's statements about what they liked and disliked about themselves (Piers & Harris, 1964).

Item analysis was conducted using a sixth-grade sample of 127 students. The 30 highest and 30 lowest scores were identified and on each item Cureton's chi test (Lindquist, 1951) was applied to determine whether the item significantly discriminated between the high and low groups at the .05 level or better. In addition,

only those items answered in the expected direction by half or over half of the high group were used. Eighty items met these two criteria and constituted the present scale, which can be administered in approximately 20 minutes.

Reliability. Most of the reliability data come from the original standardization study which used the 95-item scale.

Internal consistency. To judge the homogeneity of the test, the Kuder-Richardson Formula 21, which assumes equal difficulty of items, was employed with resulting coefficients ranging from 0.73 to 0.93.

Stability. A retest after four months on one-half the standardization sample resulted in coefficients of 0.72, 0.71, and 0.72 which were judged satisfactory for a personality instrument in the experimental stage over so long a period of time.

The revised 80-item scale, though shorter, was shown to have a better reliability since Wing (1966) found for both a two-month and four-month test-retest coefficient of 0.77 for 244 fifth graders. It should be remembered that test-retest reliability coefficients which are calculated on a lumping together of several ages or grades, or over a shorter period of time, or on any sample with increased variability, can be expected to be higher.

The scale is thus judged to have good internal consistency and adequate temporal stability.

For interpretation of individual scores, the standard error of measurement should be employed, but can only be estimated since Wing's coefficient of 0.77 is the best approximation to the stability of the test and the reported quartile but no standard deviations. An average of standard deviations reported in several samples at different grade levels gives approximately 13. The SEM would thus be approximately 6 points. A difference significant at the 0.05 level would require a change of almost twice the SEM. It is recommended, therefore, that individual changes in scores of less than 10 points be ignored (Piers & Harris, 1964).

Some writers have questioned whether young children have a stable self-concept. They feel that attitudes toward self, which later become fairly well generalized, are at first more a function of the immediate situation and so cannot be measured in any consistent fashion. While this may be true for pre-schoolers, it seems clear from the results quoted above, that at least by age eight, self attitudes have a reasonable amount of stability (Piers & Harris, 1964).

The Burks' Behavior Rating Scales

The Burks' Behavior Rating Scales (Burks, 1983) are specifically designed to identify patterns of pathological behavior shown by children who have been referred for counseling because of behavior difficulties in the classroom or home. It is suitable for use with children in grades one through nine. The manual states that it attempts to gauge the severity of negative symptoms as seen by outside

persons either parents or teachers. The 110 items used as criteria describe behaviors that are infrequent among normal children. It is also pointed out in the manual that the BBRS does not assess how the child's inner world is experienced, that this must be assessed by other tests.

The rater performs a quantitative judgment by determining the degree to which each identified behavior is seen in the child being rated. Factor analysis found the 110 items to cluster in 19 groupings. Each grouping is a subscale measuring a particular commonality of conduct. These categories of behavior have been named according to the type of behavior shown. They are

1. Excessive self-blame
2. Excessive anxiety
3. Excessive withdrawal
4. Excessive dependency
5. Poor ego strength
6. Poor physical strength
7. Poor coordination
8. Poor intellectuality
9. Poor academics
10. Poor attention
11. Poor impulse control
12. Poor reality contact
13. Poor sense of identity
14. Excessive suffering

15. Poor anger control
16. Excessive sense of persecution
17. Excessive aggressiveness
18. Excessive resistance
19. Poor social conformity

Factor analysis of the subscale scores from difficult populations—such as normal children, disturbed children of differing ages, educable mentally retarded children, orthopedically handicapped children, and speech and hearing handicapped children—shows that different patterns of factors tend to appear in each population.

Extensive use of the Burks' Behavior Rating Scales indicates it has some ability to

1. Identify patterns of disturbed behavior that distinguish between several groups of children
2. Show changes in behavior patterns over a period of time
3. Indicate areas in a child's personality where further evaluation might advantageously take place
4. Provide a source of information useful to school personnel for conferences with parents
5. Predict which children will do well in special education classes and which will not
6. Be of practical value when used by both parents and teachers

Standardization. The 110 scale items were chosen from a large pool of items originally constructed by the author. Items were selected after having met the following standards: (1) demonstrated ability to distinguish between children placed in classes for disturbed children and children in regular classes; (2) retained a sufficiently high test-retest reliability correlation coefficient; (3) judged by a panel of educational specialists to be properly descriptive of a specific observable aspect of behavior and easily understood; and (4) shown a statistical propensity to be grouped with other items into a category that could be assigned a behavioral meaning and a label.

Item score weights. The five-point scale, against which each item is checked, implies a linear increase from Steps (1) through (5). The author recognized that estimates of degrees of exhibited behavior are always subjective in nature, and the basis for judgment about severity will be to some extent characteristic of the rater. However, the deviate behavior symptoms described on the scale are not likely to be seen in abundance in any regular classroom.

Reliability and validity. Item reliability can be made to appear very high if standardization procedures are carried out only on children who behave normally. The great majority are given ratings ("You have not noticed this behavior at all") on most items and are given the same ratings the second time. For this reason, item reliability was established by having 95 disturbed children from grades 1-6 rated and rerated within a period of 10 days by their teachers. Significant differences were found for several items, but these

differences were attributed to a shift in the means and of insufficient magnitude to make a practical difference. Considering the sample employed, all items demonstrated high correlation coefficients ranging between .60 and .83. The average item/item retest correlation was .705.

The case for validity of the BBRS came from several sources. The instrument was constructed over a period of four years. Clinical observations of children, evidence from the literature, and extensive use over eight years have established content validity. Five sources, criterion-related studies, contrasted groups studies, content studies, and factor analytic studies and construct validity investigation have supported the case for validity.

Research Design

The study was designed to provide approximately three hours of intervention within a six-week period. Fifteen students were assigned to the group receiving the water skiing instruction. Fifteen students were be assigned to the control group. Assignment to the groups were based on selection utilizing a table of random members.

The research design employed the Pretest-Posttest Control Group design. In this design the control group and experimental group were chosen through the process of randomization to achieve experimental equivalence. The two groups were pretested and posttested on the dependent measures. The experimental group received the experimental treatments while the control group did not.

The experimental design was diagrammed as follows:

Group	Pre-test	Independent Variable	Post-test
(R) ^a E1	Y1	X	Y2
(R) C	Y1		Y2

^a(R) refers to random assignment.

This design controlled for the rival hypothesis that the threats to internal validity described by Campbell and Stanley (1963) could have influenced significant differences between the experimental and control group post-test scores rather than the experimental treatments.

While this design controlled for the eight threats to internal validity (history, maturation, testing, instrumentation, regression selection, mortality, and interaction of these), it did not directly control for such effects as the interaction of the treatment program with other variables. Threats to external validity concerned the relevance of the findings regarding the effects of the treatment beyond the confines of the experiment.

Campbell and Stanley (1963) describe four threats to external validity or generalizability:

1. The interaction of testing and treatment was controlled for in that the total fifth-grade class in both schools is pre-tested. While pre-testing may sensitize the children to the valuing aspect of certain positive

- self-concept attributes, the constructs of self-concept is not addressed, nor are any references made to children's responses on the measure.
2. The interaction of selection bias and the treatment was a possible source of threat to validity in that the variable of the personality characteristic, that lends an individual to voluntarism or cooperation, exists. The random selection procedure should have provided a diverse group of students, who have many similarities and differences of great enough variety as to minimize the effect of this one common characteristic.
 3. The threat of reactive arrangements seems unlikely in this experiment in that while selected students had the option of participating in an activity, they were not informed that they were part of an experiment.
 4. The threat of other interactions with the treatment or multiple treatment interference can never be controlled for with complete assurance, but does not appear to be a factor in that specific combinations of conditions are not likely to be impacting this group of children as a whole due to their diversity. No known historical event such as a major children's movie depicting a character who finds success as a result of change in self-esteem has occurred.

CHAPTER 4 RESULTS

This study was an examination of the effects of an intervention process involving water skiing on the self-concepts of fifth grade boys and teacher ratings of their behavior. The water skiing lessons provided a success experience in an activity external from the school environment in which learning was dependent on the effort of the student. The training was expected to increase the student's ability to control his behavior to achieve a goal. Through the development of skills in water skiing, the student is expected to develop a more positive self-concept.

A sample of thirty boys, whose self-ratings on the Piers-Harris Children's Self-Concept Scale fell in the lowest 25% of a population of 120 fifth-grade boys, was identified from three elementary schools. The boys were randomly assigned to an experimental and a control group. Fifteen boys received the treatment involving the water skiing lessons. The other fifteen boys, who comprised the control group, received no treatment.

Classroom teachers rated the behaviors of the boys on the Burks' Behavior Rating Scales. The categories of behaviors rated by the teachers were those identified in previous studies of self-concept as those negative behaviors that were shown to decrease if self-concept were enhanced.

The researcher examined the change between the scores on the self-concept scale and the behavior ratings on the pre- and post-measures. The interval of time between the pre-test and the post-test was approximately six weeks.

The data collected were examined in order to test the three hypotheses. For the first two hypotheses an analysis of covariance was computed using the Statistical Analysis Systems (SAS) General Linear Models Procedure. The results were used to determine the differences in the control and experimental groups on all measures after adjustments for pre-test differences. The first two hypotheses were tested by this analysis. For the third hypothesis a correlation coefficient served to find the relationship between the two dependent variables, self-concept and behavior.

Hypothesis 1

There will be no difference between the subjects who participated in the water skiing program and the control group in reported self-concept as measured by the Piers-Harris Children's Self Concept Scale.

Before testing for significant differences on the post-test for the Piers-Harris using ANCOVA, a test for the interaction between the pre-test and the treatment was calculated. This was necessary since ANCOVA assumes that there is no interaction. The computed F ratio for the interaction equaled .38 ($p < .5437$). Since the probability of the computed F ratio was greater than the criteria set

for statistical significance ($\alpha = .05$), there was insufficient evidence to reject the null hypothesis of no interaction. Therefore, the ANCOVA was appropriate for this data set.

Table 1 shows the means of the experimental and control groups' self-concept scores adjusted for the covariate (pre-test). The adjusted mean for the experimental group was 54.4 and the adjusted mean for the control group was 40.0. The computed F-statistic equaled 18.33 ($p < .0002$). Since the probability of the computed F ratio was greater than the criteria set for statistical significance ($\alpha = .05$), there was sufficient evidence to reject the null hypothesis. Therefore, subjects who participated in the water skiing had significantly higher self-concept scores than the control group.

Table 1. Means of the experimental and control groups on the self-concept scale adjusted for pre-test by covariance

Group	N	Pre-test	Post-test	Adjusted Mean	F Value
Experimental	15	35.60	52.8	54.4	18.33*
Control	15	38.73	41.6	40.0	

* $p \leq .05$

Hypothesis 2

There will be no significant difference between the subjects who participated in the water skiing program and the control group in teachers' reports of behavior as measured on the Burks' Behavior Rating Scales.

As in the previous analysis, the test for interaction was also conducted. This test resulted in a computed F-statistic of 63.9 and a p value of .0001. Although the observed probability is less than the criteria for significance, an interaction was found to exist between the scores of the treatment group and the control group. Since the ANCOVA was inappropriate, separate regression lines were plotted for the treatment and control groups to help interpret the nature of the interaction.

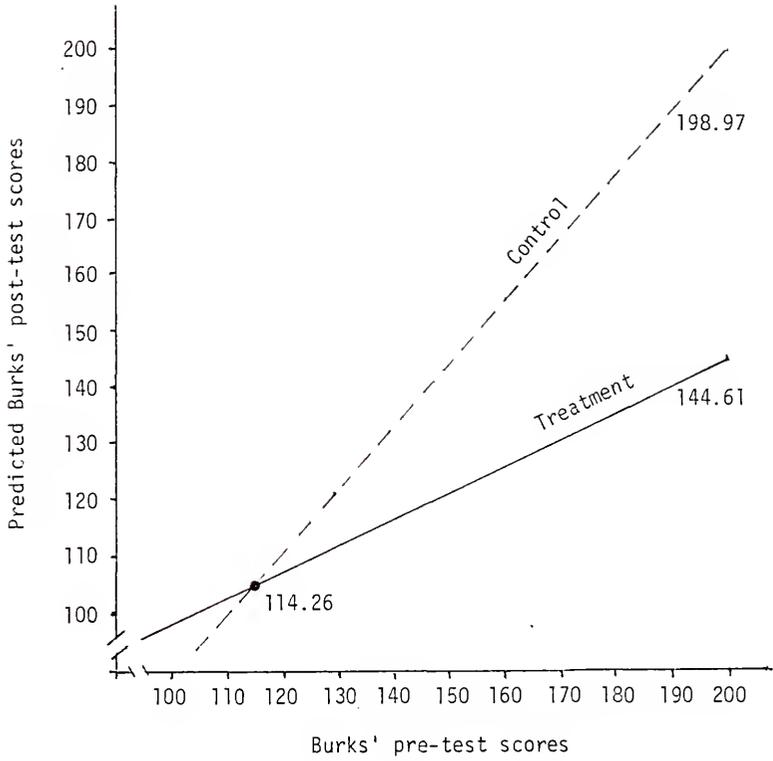
The regression lines for the treatment group equaled $\hat{Y}_1 = 54.01 + .453 \text{ pretest}$. The regression line for the control group was $\hat{Y}_2 = -18.43 + 1.087 \text{ pretest}$. A plot of these regression lines appears in Figure 1. The two lines intersect at the point of 114.26 at the pretest and 105.77 on the posttest.

For scores above 114.26 on the pretest, the treatment group scored below the control group on the Burks' posttest. The higher the Burks' pretest score, the larger the difference between groups on the posttest score. This can be interpreted to mean that the program was most effective for the students with the most severe behavior problems. Therefore, the second hypothesis was rejected.

Hypothesis 3

There is no relationship between self-concept and teacher ratings of behavior before or after the intervention.

For the treatment group, Table 2 summarizes the relationship studied.



		Pre-test: 100	Pre-test: 200
$\hat{Y}_1 = 54.01 + .453 \cdot \text{pre-test}$	Treatment =	99.31	- 144.61
$\hat{Y}_2 = 18.43 + 1.087 \cdot \text{pre-test}$	Control =	90.27	198.97

Pre-test: 100

Pre-test: 200

Figure 1. Behavior rating regression slopes for the experimental and control groups

Prior to the intervention, the treatment group's correlation between the scores on the Burks' and Piers-Harris scores was 156 ($p = 5.76$). Following the treatment this group's scores showed a correlation of .079 ($p = .778$). These figures indicate that no significant correlation existed for scores on either behavior or self-concept either before or after the treatment.

Table 2. Correlation coefficient between experimental and control groups' scores on self-concept teacher ratings of behavior

Variables	n	Correlation r	f
Pre-measures			
Self-concept/behavior	15	-.157	.5760
Post-measure			
Self-concept/behavior	15	-.079	.7783

Prior to the intervention, the treatment groups' correlation between the scores on the Burks' and the Piers-Harris scores showed a correlation of $-.157$ ($p = .576$). These results indicate that no significant correlation existed between behavior or self-concept scores after the intervention.

For the control group the correlation between the pre-scores on Burks' and the pre-scores on the Piers-Harris was $.372$ ($p = .171$). Following the treatment this group's scores showed a correlation of $.472$ ($p = .075$).

Since no correlation appears to exist between behavior and self-concept for the group receiving the treatment, the decision rule is to fail to reject the null hypothesis. Therefore, Hypothesis 3 was not rejected.

The researcher investigated the effects on fifth-grade boys of a water-skiing intervention based on a model of self-control and positive self-referent language. The training, which was unrelated to school experience, increased the student's ability to control behavior and improve confidence in his ability to achieve goals. The results showed that self-concept scores increased significantly for the experimental group. Behavior as rated by the classroom teacher showed the most improvement when compared with the control group in those children in the experimental group who exhibited the most severe behaviors.

CHAPTER 5
DISCUSSION, CONCLUSIONS,
IMPLICATIONS, AND RECOMMENDATIONS

The researcher examined the effects of an intervention in which a group of low-achieving fifth-grade boys experienced success in a non-school related activity. The investigation was a comparison of self-concept and behavior of the experimental and control groups before and after the treatment. During the water skiing intervention sessions, belief in oneself, positive self-referent language, and self-control were emphasized. The steps in the learning process were broken down into simple components, sequentially arranged so that by listening and practicing each step until mastered, the actual act of skiing could be accomplished successfully. The children were able to recognize their undeniable success.

From the 120 children who participated in the pretesting, the investigator identified 30 boys who scored in the lowest 25% of the population. The 30 boys were randomly assigned to an experimental and a control group. The 15 children in the experimental group participated in three sessions in which they learned to ride a kneeboard and to ski on two skis. The control group received no treatment.

The boy's success in skiing was a result of their own effort to follow directions and to assure themselves through inner language that they have the ability and courage to succeed. In addition, the

training placed each boy in a new environment that held no previous experiences of either success or failure. Boys who described themselves on the self-concept scale as a person who gives up easily were motivated to control their behavior and make a sustained effort to follow directions.

Evidence that self-concept and success are positively related is supported consistently in the literature in studies of achievement and success-enhancing behavior. Children who have confidence in their ability find pleasure in challenge and achievement. Increases in children's self-concept are often accompanied with decreases in attention-seeking problematic behaviors, especially in acting-out children. Confidence replaces uncertainty as children's experiences contribute to the perception that they are successful and worthwhile in the estimation of others; therefore, their frame of reference and content of self-referent language are broadened.

The first dependent variable, self-concept, was measured by the Piers-Harris Children's Self Concept Scale. This scale contains 80 items in which the individual answers "yes" or "no" to a descriptive statement. The scale is used to assess differences in self-concept among the children. A high score indicates positive self-concept.

The second dependent variable, the Burks' Behavior Rating Scales, containing 19 categories describing adjustment to school, was used to measure the children's behavior according to teacher report. Low scores indicate positive behavior adjustment. The categories rated

by the teachers were those identified in previous studies of self-concept as those behaviors that were shown to improve if self-concept were enhanced.

In reporting the results, the correlation between behavior and self-concept was not supported. No statistical correlation could be found to exist in the treatment group either before or after the intervention. The children with the lowest self-concept were not necessarily the children with the most problem behaviors.

Discussion

Analysis of covariance produced results which gave evidence that the fifth-grade boys who participated in the water skiing sessions differed significantly in their level of self-concept from those who did not participate. Data indicate that all participants improved their self-concept score except for one child who scored the same. There were, however, considerable differences across subjects in the extent of the changes. Water skiing was an effective experience because it demonstrated, systematically, how sustained effort would result in undeniable success. The boys were successful as a result of their personal effort, and their success was recognized by the significant persons in their lives.

Of special interest was the relationship between teacher ratings of behavior before and after the intervention. The analysis of the data showed that the intervention was the most effective for the children who had the most severe behavior ratings. An interaction was found to exist showing that the behavior changed least for the

children who did not exhibit problem behaviors and most for those who did. Comparing the experimental to control groups, the higher the Burks' pre-test score, the larger the differences on the post-test score.

An explanation for this occurrence is that the children who report low self-concept do not necessarily also exhibit severe or moderate behavioral indicators. Participants were selected from the group of children whose scores on the Piers-Harris Children's Self Concept Scale were in the lowest 28% (as described in Chapter 3). Behavior was not considered in the selection process. Teachers were asked to rate the behaviors to describe the children as they perceived them before and after the treatment. Some of the children were rated as exhibiting behavioral indicators associated with poor academics, poor attention, poor anger control, and poor impulse control, as might be expected. Other children with low self-concept scores were not attention seekers and were described as children who would try not to stand out in a group. Those children were seen as fairly compliant workers, with few negative behavioral indicators. These were the children whose behavior ratings had very little change. Informal reports from parents and teachers indicated that these children seemed more outgoing. A few parents mentioned a decrease in dependency behaviors and increase in goal-directed behavior.

To be willing to report low self-concept eliminates the defensive child who acts out a defiant bravado and has "no faults." The child who does not feel good about him/herself and is able to

report this can be either a hard worker who wishes to be accepted by others or a child with moderate and severe behavior problems. The parents were enthusiastic even though somewhat apprehensive about their children's participation and were most cooperative in having the children at the ski school at the appointed time. The parents also were supportive of the basic premises that were presented when the informed consent form was signed.

Only one boy did not have a parent present during the lessons. She was working full time to support a family of seven children; however, she said she was most supportive and encouraging when he came home. She listened to his description of what he did and looked at his magazines about skiing.

Competence in swimming varied among the participants. Two boys were completely non-swimmers and had never been in water over knee deep. Several others were essentially non-swimmers, in that although they had played in water and believed they knew how to swim, they would be at risk in water over their heads if not wearing flotation. By the end of the program, all the children were relaxed and enjoyed "swimming" while wearing flotation. A few of the boys were fairly strong swimmers at the beginning of the program. Swimming achievement and confidence in the water contributed to more rapid achievement in skiing. Level of accomplishment did not seem to influence amount of increase in self-concept.

By the end of three sessions all boys could come out of the water on two skis. All but one boy were relaxed and proficient at

kneeboarding and wanted to keep doing it as a continuing interest. Some were proficient enough to begin learning on one ski. The children's interest may contribute to future goal-directed behavior. It can be said that the children tested their limits to show their strength and courage. However, it was noted that every child expressed feelings of apprehension at the beginning of the study. The children could only attribute their success to their own efforts thereby increasing feelings of self-worth.

Implications

The study has implications for educators, parents, and others who work with children and who are concerned with finding methods of improving self-concept and channeling behavior in a productive direction.

1. The treatment program describes a step-by-step method that can be replicated easily given proper equipment and an instructor who has training in boat handling, and who understands a child's need for success.
2. The treatment program demonstrates that success and recognition of success by self and others is important to the development of positive self-concept and the acquisition of productive behavioral skills.
3. The treatment effects on the children contribute to the supportive evidence that justifies implementing physical activity programs for children who are experiencing difficulty in school achievement.

4. The study contributes to the literature that supports the premise that self-concept is learned and can change.

Limitations

Certain limitations to this study existed. Because of the sparsity of existing literature based on the effects of physical activity on improving self-concept, few guidelines for the study were available. As a result, procedures were developed with little direction from other studies.

It must be recognized that this treatment cannot be used with children who are very obese, or with children who are extremely frightened of water. It would take a longer period of time.

Variables such as home problems and social dynamics within the school may adversely affect the participants and may limit the changes that might otherwise occur in some children. On the other hand these same variables may increase the amount of positive growth that is maintained by some children.

The intention of the investigator was to conduct a blind study in which the teachers did not know which children were receiving the treatment. However, some of the children in the experimental group gave enthusiastic accounts of their accomplishments in the school setting and some children wrote descriptive paragraphs or drew pictures. A few teachers might have inferred from this that these children were in the water skiing program.

Recommendation

The following recommendations for further research are prompted by the results of this investigation.

It is recommended that similar programs that use a physical achievement be implemented. Further study might indicate certain types of physical activity other than water skiing that are motivating and have a high achievement rate and yet are challenging enough to produce positive changes in the self-concept of children.

Conclusions

The researcher measured the effects of a water skiing intervention on children who reported low self-concept on the Piers-Harris Children's Self Concept Scale. The intervention provided the children with an experience in learning a physical activity unrelated to school. Basic elements of learning and the use of self-control applied by a highly motivated child produced immediate success. This successful application of personal effort on the part of the child contributed to increased positive self-concept and to the awareness of the relationship between self-control and success.

Water skiing was an effective means for helping the children acquire positive self-referent language and for providing a success experience that children were highly motivated to achieve. It also provided children with an accomplishment that they could not deny or destroy. It can be demonstrated and performed by others.

Water skiing is perceived as something exciting that most people, especially children, do not know how to do. It is often

perceived by others as dangerous, risky, and involving high speed. It is generally supposed that children will have difficulty learning to water ski.

Under proper conditions the only true perception for children is that it is exciting as water skiing can be learned easily by normal 10-12 year old children. Children who can climb on playground equipment use the same type of strength needed to ski. Almost without effort, they can learn to ride the kneeboard in water.

All of the children who participated in the study completed the program. All expressed regret when the program ended. The boys were all successful and accomplished a challenging goal that required them to demonstrate courage and perseverance. Each boy was proud of his individual level of success.

It is hoped that those children who participated in the study have developed new dimensions of perception and that they will continue to trust in themselves and their capabilities.

APPENDIX
INTERVENTION

APPENDIX INTERVENTION

The water skiing program was designed to be as failure free as possible. The plan was for the child to succeed, and that the learning skills were generalized to success in any learning experience. The steps in the lessons structure the experience as a series of experiences in learning. With the basic commitment of wanting to learn to ski the child was motivated to listen, to rehearse mentally, to produce a mental image of oneself performing the behavior and concentrating on self-control.

The program was designed so that the child experienced a series of small steps that would result in an accomplishment which appeared difficult and dangerous. The premise, to be enforced frequently, was that the child recognized that what he/she believes about "self" was crucial in learning any skill.

Lesson I

Orientation. The child meets the instructors and is given time to examine the boats and skiing equipment.

During the child's exploration and questioning, the instructor observes indicators of the child's level of apprehension, excitement, fear, confidence, feeling of inadequacy, determination, and self-control. A fearful, apprehensive child requires more time in the initial stages in the shallow water or on shore.

Safety. The child is fitted in a ski vest and shown how to tighten the straps and how to fasten and unfasten the buckles. The vest (jacket) is to be worn at all times near the water.

Rules about running on the dock and staying seated when the boat is moving are discussed.

Communication system. In order to facilitate learning, the child and the instructor must communicate accurately with each other. Basic signals for go, stop, faster, and slower are rehearsed.

Swimming. The child will be encouraged to demonstrate skill and confidence in the water and the instructor will ask how well he/she can swim. (The child is wearing the flotation vest.)

How to learn-link to school skills. The instructor introduces this concept that school skills and ski skills have common characteristics. For instance: "Learning skills you have developed at school are very important and remembering them and using them will help you succeed in learning to ski."

The instructor will stress the importance of the following ski-school skills: (1) listening and observing, (2) rehearsing mentally how it looks and how it will feel, (3) trying what he/she has pictured doing, (4) evaluating what happened, telling self what was done that was right and what needs to be changed, (5) relaxing and praising oneself.

The instructor should allow discussion to emphasize that learning anything difficult is done in a calm, deliberate manner in

methodical steps. "You will learn if you do each step as the lessons progress. Some steps are harder than others and you may have to keep trying. Becoming angry and losing control is not helpful and neither is saying "I can't."

Physical ability. It can be demonstrated that the child is physically capable of skiing, if this is a concern, by having the child put skis on before entering the water, having him/her sit down on the backs of the skis, assume the skiing position, and pulling him/her on land. This is done on a non-abrasive surface. Wet vinyl plastic is ideal.

Introduction to equipment. Riding the kneeboard is taught first as it requires minimum coordination, provides immediate success, and is fun. The child is told to wade into the water until chest deep and test the flotation. This experience will promote confidence in the safety system. The kneeboard is floated out and each child is encouraged to paddle it and float on it near the shore. When the child can maneuver the kneeboard by paddling, the ski rope handle is given to him/her. Instructions are given on where to hold it and how to assume the correct body position. The child is pulled by hand through the shallow water by the instructor. The 50-foot ski rope is then attached to the boat. The instructor gets into the boat approximately 50 feet away from the child and then pulls the child along on the board to the side of the boat. The instructor must evaluate for confidence level. If apprehension is expressed or observed by the child, the instructor should not go on to the next step. When

the child is ready for the next step, the instructor provides praise for effort, for example, (a) "Picture what you are trying to do." (b) "Let your body become calm and relaxed." (c) "This part seems to be giving you trouble; make sure that you get this very well so that the next step will be easier to take." (d) "Some of the steps will be easy, some may be hard, but keep trying." When apprehension is controlled about lying on the board in the water, the instructor demonstrates pulling the knees up to the chest and straightening the body to a kneeling position. How to shift weight to the arms is explained. Next the child is told to imagine the steps and to repeat them back. The instructor explains to the child in review that he/she will ride the kneeboard lying down until comfortable and relaxed, then move to a kneeling position. The goal is to be able to turn the board and cross the wakes. Praise is given using expressions such as, "You have really learned a lot already. You are really a good listener. I'm impressed that you are working so hard to concentrate." The boat should be positioned so that there is no slack in the line and that the point of the kneeboard and the child's prone body and the rope are in line with the stern of the boat. This is essential to the failure-free nature of the teaching. The boat is allowed to move forward at idle speed—fast enough to move the child on the floating board, then stopped slowly and the child told that the boat will go faster to make the board ride up on the water: "You will be going about 10 m.p.h. You go faster than 10 m.p.h. on your bicycle."

"Enjoy the ride, you've worked hard so far. This is the fun part. If you get tired or want to stop for any reason, just let go."

The instructor should again idle the boat until the child looks ready, then say "Ready." Then the instructor should add power firmly and evenly to 10 m.p.h. depending on the size and confidence level of the child. While towing the instructor should encourage the child by discussing enthusiastically the child's progress with the other observer.

If the child does not initiate experimenting with the board, the instructor should bring the boat to a slow stop and tell the child how great he/she is doing and that the instructor just wanted him/her to know how to lean his/her body to turn to one side or the other and that it is fun to ride over the wake—like a little roller coaster ride.

The instructor should praise the obvious physical skills and determination. He/she should eliminate directing any step if the child is taking the initiative to figure it out himself.

The kneeboarding experience usually lasts about 30 minutes. By the end of this time all but the most timid child should be confidently riding on his knees and crossing the boat wakes.

A short rest is given before attempting to ride skis. Someone demonstrates for the child while he/she rides in the boat.

The skiing part of the lesson requires about 15 minutes, depending on the child's level of confidence.

First, the child's feet must be fitted snugly in the bindings on the ski. For children under 75 pounds training skis are tied together at both the front and back, allowing the skis to separate only about 6

to 8 inches. This eliminates the problem of the child allowing his legs to spread apart.

The physical requirements are reduced to a minimum by teaching the child to balance his body in a knees-up crouched position with arms straight and around the knees. Elbows should be at the top of the knees at water level. The child can hold this position throughout the start and planing off of the skis.

Unless the child is extremely confident and coordinated he should not attempt to stand up until the skis plane. At this time he can carefully straighten his legs, keeping his back straight and shoulders level. It must be explained that the skier should not try to pull up by pulling in on the rope. Arms must be kept straight and legs must lift the body up. The skis should move at a shallow angle through the water easily on the start, and not forced against the water, by bracing with the legs. The boat must be allowed to do the work.

At this point, as with the kneeboard, the child should be in shallow water and the instructor should pull the child by hand through the water to insure that the child can hold the position.

Plenty of time must be given to this step as it will prevent many circlings of the boat and possible discouragement for the child. The child then repeats the same exercise while the instructor pulls the child toward the boat.

The child's goal is to keep the ski tips about 6 inches out of the water, the skis steady, and the arms straight, elbows around the knees. Again, he should let the boat pull him until the planing position

is reached and then straighten the legs slowly until he is standing with his back straight and knees slightly bent.

Remind the child to visualize these steps and rehearse mentally. Encourage the child to take responsibility for telling you when he's ready and if he wants to go faster or slower. Remind him that if he wants to stop to let go and the boat will circle him with the rope.

If the preceding steps are well rehearsed the average child should come up on the skis in one to three tries. If the child can hold the position described above and has the confidence to hold on, the skis will plane off with the child staying in the sitting position. Managing this should be considered as having succeeded in skiing.

The remainder of the time should be used for riding the skis with emphasis on keeping the back straight, knees slightly bent. If competency is reached encourage the child to turn the skis and try to cross the wake.

Lesson II

The skills learned in Lesson I are practiced. Also, the child is given the choice as to what he wants to try first. The only condition is that he will try to make progress and learn something new during the second session.

Generally most children want to ride the kneeboard first because it is less complex and initially can be more exciting. Children readily learn to ride back and forth and even jump the wakes. Speed can be gradually increased at the child's request. Maximum speed on the

kneeboard should be around 18 m.p.h. Children are often able to make the board jump about a foot off the water when crossing the wake. The Hydroslide used in this experiment can be turned around in a 360-degree spin with a little experimentation on the part of the child.

Lesson III

Reinforcement and practice of skills learned in Lessons I and II and the further development of skills are emphasized.

The child skis approximately an hour each of the three sessions. The progress is completely individual. Usually children will ski during the first session. In the second hour the child will improve his kneeboarding by going faster, turning better, and possibly crossing the wake. In the second and third sessions, if the child is comfortable coming out of the water and can stand up easily, the instructor should untie the ropes that hold the skis together. The child should be encouraged to cross the wakes. The instructor should encourage the child to relax, look around, and wave at the people. The back should be straight, knees slightly bent, and arms straight. The arms can be held lower now, with a slight bend in the elbows, and approximately between the chest and waist level. A relaxed appearance is the child's goal.

Some children learn very quickly and are very confident in their physical abilities. Occasionally a child will be able to ski on one ski by the third hour. As soon as the child is comfortable and confident and wants to try to ski on one ski, his first step is to lift a ski slightly off the water by shifting his weight to the other leg. Choice of which leg to ski on is entirely up to the child. He must

decide which way feels more natural. When he can stand with all his weight on one leg, he is ready to drop a ski.

To kick off a ski, the child puts the most weight on the leg he/she intends to ski on. The child must now carefully slip his/her heel free from the binding slowly and carefully until the only weight on this ski is on the ball of his/her foot. The child should be told to slowly lift the foot out of the binding and just to stand there like a stork—on one foot. The instructor must stress not to try to kick off the ski; the goal is to use a minimum of movement. Once the child has learned to balance, he/she can slowly put the free foot down on the back of the ski right behind the other foot. A tactile assist for this is to tell the child to touch the back of the leg with the foot and slide the foot down the back of the leg to the ski.

Patience is the main quality that the instructor must demonstrate. No matter how long the step takes, the child must be praised for his/her effort.

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BIOGRAPHICAL SKETCH

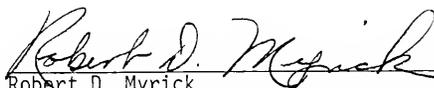
Barbara Stevens Cleveland was born in Portsmouth, Ohio, on January 7, 1940. After receiving a Bachelor of Science degree from the University of Missouri in Education, she married James G. Cleveland and began her teaching career. She was employed as a teacher in the Fairfax County Public Schools in Virginia. She completed her Master of Arts degree in guidance and counseling from George Washington University in 1966. She continued graduate studies in counselor education at the University of Florida and in 1981 received a Specialist in Education degree. During this time, she was employed by the Alachua County Schools as a guidance counselor. She continued working as a counselor and began coursework for the doctoral program in school psychology at the University of Florida. She is a member of teachers' and counselors' organizations and Pi Lambda Theta educators honor society. She presently resides in Hawthorne, Florida, where she works at Shell Elementary School.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



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