



# ***Pathways to Success***

**A Preschool through Third Grade  
Educational Program**

**A 30 Year Project**

**By William J. Kirkwood, Ph.D.**





# Pathways to Success

## Introduction

Developed over the past thirty years, *Pathways to Success* systematically produces character qualities which result in high academic success. Born out of California's attempt to restructure its elementary school programs in the 1970's, *Pathways to Success* is an individualized, continuous progress program with continuums in both the affective and cognitive domain. In the most fundamental sense, success is defined by seven levels of character developed growth along six affective continuums: investment of energy, value development, goal directed behavior, self-esteem, responsibility, and independency.

The schools serve working parents, accepting everyone without selection factor. When young children enter the program, it is assumed that they have very little or no growth along any of the character development continuums. And as a function of the program, children develop a high level along each of



these continuums. In the cognitive domain every concept and skill to be learned has been identified, individualized instructions have been taught, along with sufficient learning exercises. Continuous monitoring helps to assure mastery before the child advances to the next higher concept. Much of the curriculum is in its third and fourth generation of development, and to date, in excess of two hundred children's workbooks have been written for use in the program. A computerized tracking system enables each

child's work production and academic behavior to be reported continuously.

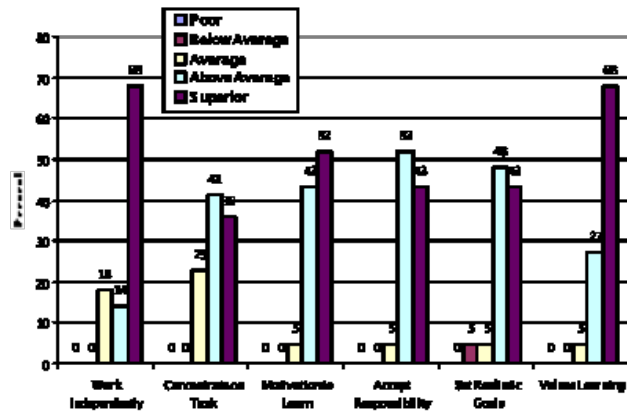
Beginning in kindergarten, most students are involved with several programs on the computer daily. In first grade, every student has a computer on their desk networked to the Kirkwood Program. All learning exercises are assigned by the computer; levels of comprehension are continuously monitored. A one-on-one child-teacher time is structured daily into the program, which facilitates the development of a quality relationship and is powerful in stimulating the development of character and cognitive growth.

Academic achievement is seen as an outcome variable as a function of progress along the character development continuums. By the end of third grade, most children are working from one to three years above

grade level with a very high degree of mastery. Standardized achievement test scores correspond to and validate this high level of academic achievement.

Over the past fifteen years, four longitudinal studies have been conducted to assess the level of success of the children who graduate from the program’s third grade. The results of each of these studies were highly similar. Eighty to ninety percent of the students see themselves or are perceived by their parents as above average or superior on each of the character development continuums. Each student was planning to, was attending, or has graduated from college. With many students having completed college, the over all grade point average for each third grade graduate is in excess of 3.5 through the remainder of their education. Ultimately, the results indicate that *Pathways to Success* produces students who continue to be very successful throughout their education.

**Table 1**  
**Character Qualities - Student Perception**



## Historical and Theoretical Foundations

*Pathways to Success* began when California restructured its primary grades in the 1970’s. According to Wilson Riles, California’s former Superintendent of Public Instruction, “..the goal of the early childhood education proposal is that by the end of the primary level, all children will be excited about learning and be able to proceed successfully with the rest of their school experience, having achieved sufficient command of the skills basic to reading, language, and arithmetic to enable them to do so.” (Riles, 1971). *Pathways to Success* was designed with these goals in mind.

During this period, the researcher served as chairman for three years of the board committee for the implementation of the Riles objectives in the Downey Unified School District. During that time, the same objectives were being implemented at the preschool level in the Downey Child Care Center. One of the primary thrusts was developing self-esteem programs tied directly to academic success (Kirkwood 1976, 1978, 1984, 1994).

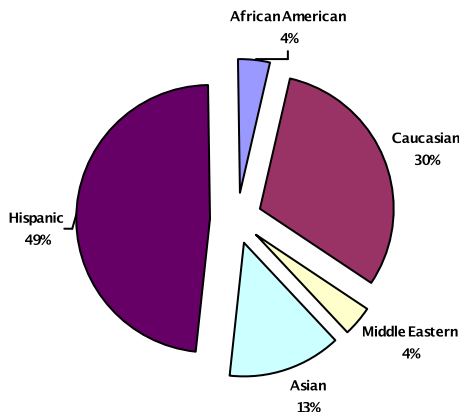
*Pathways to Success* helps meet the challenge Bloom defines in “The Search for Methods of Group Instruction as Effective as One-to-One Tutoring” (1984). Bloom’s challenge is to develop programs or systems of education that enable students to achieve at “2 sigma,” 2 standard deviations, above the average student taught under conventional group methods of instruction.

The *Pathways to Success* model incorporates many of Bloom’s mastery learning principles. As outlined by Carrol in “A Model of School Learning” (1963), the system defines sequential total mastery of each concept taught as a fixed outcome with time as the variable. The daily one-to-one time incorporates individual counsel, diagnostic-prescriptive interventions, and tutorial instruction into the program for each child. Individualizing the educational system enables many of the components that produce the “2 sigma” difference to be incorporated into the program. *Pathways to Success* has the potential of providing an affordable, workable solution to Bloom’s “2 sigma” problem.

## The Schools

The preschool program is for children ages two through pre-kindergarten and is operated at the Downey Child Care Center, a state-licensed day care center for 100 children. The school operates a full-day program for children of working parents. The school population is composed of children from different

**Table 2**  
**Racial and Ethnic Composition**  
**of Students in Pathways for Success Program**



ethnic groups: 30 percent are Caucasian, 49 percent are Hispanic American, 13 percent are Asian American, 4 percent are Middle Eastern, and 4 percent are African American. Please refer to Table 2. Twenty-two percent of the children come from single parent families.

Socioeconomic backgrounds range from young mothers in government-funded

education programs to a few children of working professionals.

The elementary school, called Kirkwood Educational Center, maintains an all-day program for working parents. Approximately 80 percent of the children in attendance at the elementary school are children who graduated from the preschool. Most parents continue their children at the elementary school because of the need for day care while they are working and because of program satisfaction. The remaining 20 percent of students at Kirkwood are new kindergarten students, producing a total enrollment of 140. There is open enrollment for all children without selection factor who are capable of mainstreaming.

### **Development Process**

At present the program is in its thirtieth year of development. While the objectives have remained relatively the same over the years, the curriculum has been one of constant growth, development, and refinement. A six year work foundation was invested in curriculum development in programs for three and four year olds before kindergarten was added. The commitment was to continue the program by adding a grade level every year through third grade. Approximately fifteen years ago, a computerized tracking system was designed to continuously monitor student work production. A forty-two hundred word computerized vocabulary-spelling program modeled after a successful previously implemented audio cassette program called, *Learning To Spell With Buzzy Bee*, was added. A math facts memorization program was designed and computerized to help children learn addition, subtraction, multiplication, and division problems beyond concrete and mental operations.

A sophisticated computer network with server was put online after several years of design and programming. This allows for complete individualized instruction and monitoring of student mastery level and work production. Students can log on from home to complete assignments. Each year students have gone further and further in the curriculum, necessitating the development of curriculum through and beyond the sixth grade. The program has been in constant development and improvement for the past thirty years.

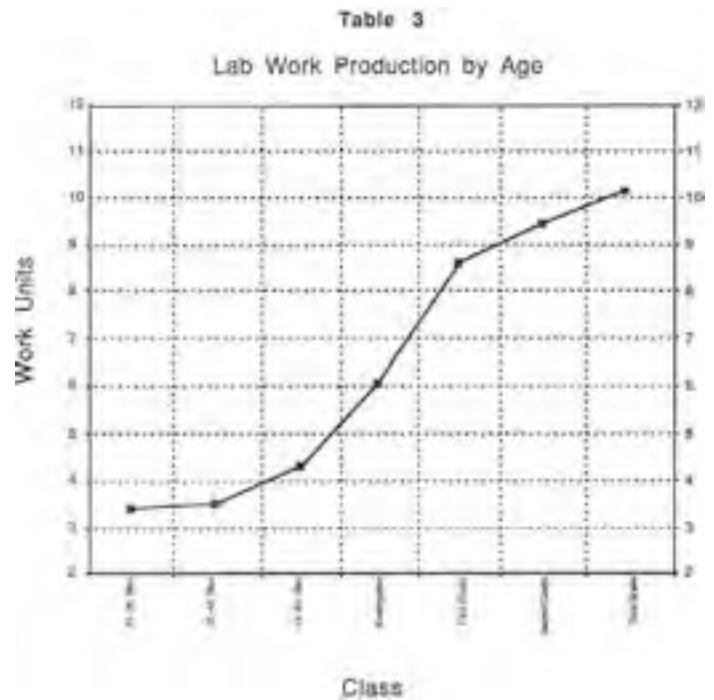


# Affective Domain

## Investment of Energy

A major factor in determining whether students are successful in terms of their education is the amount of energy they are willing to invest. Particularly in the beginning of the program, there is a strong focus placed upon the student's energy system. This variable is something the young person has a greater degree of control over than other variables such as retention, concentration, or rate of concept mastery. In the program the assumption is made that the young person has an ample amount of energy. The observation is that young people do not seem to want for energy. Our task in education is to develop a program that will encourage them to invest some of that energy into working to learn.

Within the context of teacher expectation, support, encouragement and recognition, the child invests energy into completion of the project. One of the underlying premises of the program is the belief that any time an individual takes upon him or herself a project and invest energy into its completion, the person will have an intrinsic sense of satisfaction. And, if at the same time, the person can receive recognition and praise by a significant other i.e., a teacher, that individual will have a positive affective experience. They will have an experience that takes place in time and space, and for that moment enables them to feel good. More particularly, the positive affective experience enables children to feel competent and successful. As a function of these positive experiences occurring every time a child puts forth energy into a project until completion, over time, students will slowly but steadily increase their investment of energy into working to learn. Over the duration of the program, the average child will increase his or her work production from two work units to ten work units or more per lab. By the end of third grade, the children are working with a significant degree of intensity and concentration for all the time on task during each of the four labs (see Table 3).



## Value Development

The value development continuum contains a number of primary dimensions. Each of these dimensions is interwoven throughout the program. These continuums include: self worth and self value, proper care of physical body, work habits and values, interpersonal relationships, spiritual values, and the importance of curriculum subjects.

Teaching children a system of values and helping them to assimilate and integrate those values into their self structure serves as a foundation for continuous moral and ethical development. The individual should not be perceived as a static organism which is indoctrinated but as a dynamic, growing, and continuously developing personality. An individual's value system is in constant development, reanalysis, producing higher levels of sophistication. As the child experiences new problems, new moral dilemmas, and empathically understands other people more deeply, the child's fundamental values grow and develop.



A moral value system must be built within a climate of love, nurturance, and grace. Appropriate moral education includes direct instruction and application to behavior which are grounded in reasoning the child can understand. Application must be loving and seen in the context of personality growth: this process includes analysis and discussion so the child can integrate and assimilate the value with corresponding behavior. There must be a point of commitment at which children decide to commit themselves to the values and behavior. When behavioral standards are violated, children must be corrected with love and grace and be able to recommit themselves to the objective. This is a growth process.

Throughout the program, values are taught at each age in a multitude of dimensions. Many times values are taught at the point of correcting an individual child for inappropriate behavior. To provide guidelines in this area, a teacher's training book, *Teaching Values*, was written containing actual scenarios of teacher's counseling children at each age level from two through eight. The book contains over thirty of the most common situations that occur within the typical school environment.

Children learn why every academic concept to be mastered has relevance and value in every day life. Work ethic and concept relevance are taught through class instruction, teacher individual counsel, cassette tape, instructional videos, small group, and various curriculum components.

From kindergarten through third grade, children's discussion, assimilation and integration of values occur through several curriculum continuums. Most of the nearly 1,500 stories in the reading continuum



were selected because of their value content. Each story selected for oral reading and discussion group has teacher-prepared lesson plans for value discussion. Fifty percent of reading group time is allocated for content and value discussion. During the same four years along the writing development continuum, children write an essay each day covering values taught in the program. This helps further the assimilation and integration process.

### **Goal Directed Behavior**

The affective program is designed to help the child learn to set realistic goals. Academically, the goal is defined both quantitatively and qualitatively as a standard of performance. In terms of quantity, the goal is a self imposed number of work units determined by past performance the child sets for each lab and ultimately each day. A work unit is standardized on both duration of time for completion of the exercise and conceptual level of difficulty. Because of the need of the standardized work unit, it was necessary to develop all new curriculum. It is important to note that the goal is not something children set as a high target which can be achieved when they are performing at their very peak. The criterion for setting one's goal in the model is based upon past performance. The children are aware of the amount of work that they normally do over a period of time, i.e. a lab. That awareness of the amount of work completed becomes the basis upon which they set their goals. The goal is not an idealized target; it is solid, real, and tangible.



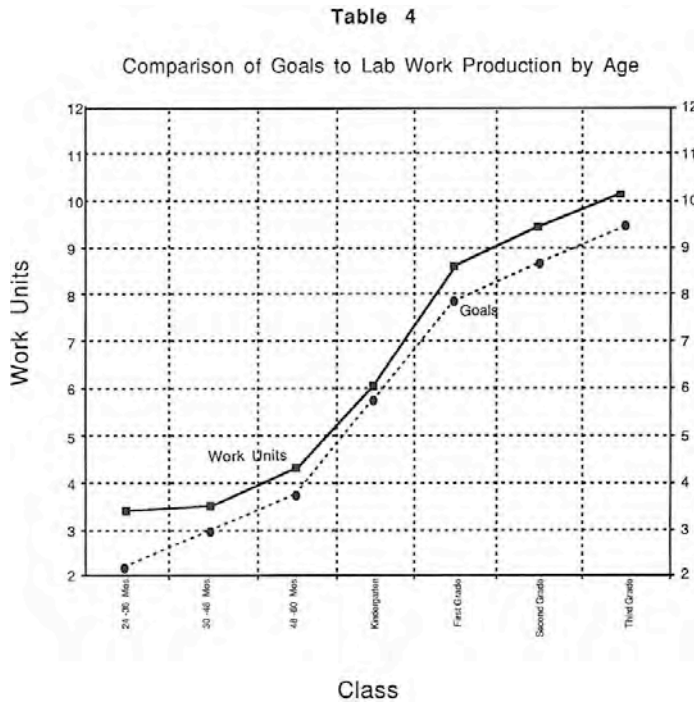
Qualitatively, the goal is defined aesthetically in terms of penmanship and neatness. The purpose is for the children to learn to always do their best, making their work look as good as possible. A hierarchical series of awards are given each week to children who achieve their goals on both the quantitative and qualitative dimensions.

It is important to note that the goal is the child's, not a figure imposed upon him or her by a teacher. The children should feel their goal is something they are taking responsibility for; and the only way that this will happen is if the goal is something that they truly determine.

The teachers are the guides and trainers. Their job is to teach the child about work performance and about being goal directed. The teacher tracks the work as the students complete it and makes them aware of it during a one-on-one called the "Five-Minute-Hour Time."

When a young student enters the program, he or she has little or no basis for setting a realistic goal,

much less achieving the goal. The goal setting continuum enables each child to develop the ability to set a realistic work goal and achieve that goal consistently. By the end of the program, the goal has become a personal commitment in which each student invests sufficient energy to achieve. Table 4 shows both the average child's increase in goal-directed behavior over time and the relationship to work units completed, demonstrating the effectiveness of practical goal-setting.



### Self-Esteem

Self-esteem is the affective evaluation children make about their abilities in a particular area such as reading, math, writing, speech, or ball handling. The affective evaluations are a product of a legion of affective experiences which have been integrated and assimilated into the person's self-evaluative structure. Self-esteem is composed of a certain type of experience called affective experience.

The program is designed to facilitate the systematic creation of positive affective experiences. The key to the creation of these experiences is the teacher. The classroom teacher is the most vital and important factor in quality education. The program is structured to enable a high quality relationship to develop between each of the children and their teachers, a relationship that truly enables the teacher to become a powerful influence and significant reinforcer. The teacher's instruction in the area of value development is critical in providing the interpretive structure for creation of these experiences. As the child puts forth effort to achieve the objective, the teacher's praise and validation result in the creation of the positive affective experiences. The creation of many of these experiences daily is the basic ingredient of self-esteem.

Five categorical divisions of self-esteem are systematically targeted for creation of positive affective experiences. These are investment of energy, work ethic, concept mastery, social development, and spiritual identity. Many times critical opportunities are not taken advantage of because teachers do not focus their objectives on them. Building self-esteem is a systematic, daily process that begins with the creation of

positive affective experiences. Once teachers truly understand the dynamics of creating positive affective experiences, they work to capture every opportunity for their creation. New and innovative validating experiences can be continually incorporated into the program.

Over one hundred different self-esteem exercises have been incorporated in the Project Learning Series. Each of these exercises represents numerous positive affective experiences in a particular area. There



are three hierarchical dimensions in the systematic development of self-esteem in the program. The first is the actual creation of the positive affective experiences. The second is the bringing of the experiences back into consciousness for definition, assimilation and integration into the self structure. The reason for this is because after the creation of the positive affective experiences, they can be too easily lost or simply forgotten. With the flow of consciousness, the experience or awareness is sequentially replaced by another. Positive affective experiences that are

forgotten do little to systematically build self-esteem. Consequently, exercises have been designed for inclusion in our twenty book Project Learning Series that purposefully bring these experiences back into consciousness. The design is structured to enable the child to recapture the experience.

The third dimension in the hierarchy is the final cementing of the affective experience into the self structure so it truly becomes a fundamental component of the child's self-esteem. This occurs during the "Five Minute-Hour" with the teacher. First the child identifies with the experience pictured in the exercise. Then the child is asked to describe in as much detail as possible similar positive affective experiences. Describing them in detail helps to cement them into the self structure. The child is allowed to use the "Happy Face Stamp" for each experience described. Exercises designed for this purpose are included in the 'Time with My Teacher' section of each Project Learning Book.

Through each successive higher affective level, self-esteem becomes a dimension less defined by teacher feedback and more by the student experiencing the reality of his own success. When the student makes personal choices, commitments, and takes responsibility for his own actions and choices, his success produces character qualities with dimensions of self-esteem and self-confidence. Self-esteem is an attribute of character that matures from a product of the creation of positive affective experiences created and reinforced by the teacher to one of self confidence as a result of personal decisions based upon values which have been assimilated and integrated into the self-structure. As the children assume authorship of their own life, make decisions of being goal directed, commit themselves to standards of good behavior, and work to achieve those standards, high levels of self confidence and self-esteem are the results.

## Responsibility

Responsibility is defined in terms of actions that are determined by an assimilated set of values and beliefs. Responsible people actively control their own behavior based upon personally held values and beliefs. If a person has few values, or the values are vague or contradictory, being responsible is by definition difficult, if not impossible. If children know and believe that it is good to exhibit a certain behavior, and if they have committed themselves to it, then they are acting responsible when practicing the defined behavior.



Establishing an individual growth program which teaches responsibility presupposes a value development program. If children are to grow in terms of being responsible for personal behavior, they must first learn and assimilate the appropriate values. Value development, personal commitment, and will power are intrinsically linked together in determining individual human behavior. This sequence develops patterns of behavior and personality, and all ingredients work together in the formation of character and character traits.

One dimension of an individual's strength of character is willpower. This is volitional power of determination that an individual must find within himself or herself. Willpower when developed becomes the engine or motor that runs the person's life. Values and beliefs serve as the road or path; reason and cognition help steer. Volition or will become the power source; physical and emotional health provide the fuel or energy.

The first step in the development of will power is the affirmation of its existence in the life of the child. When children recognize that they have the power to control and determine their behavior and destiny, a sense of authorship and empowerment occurs. It is upon this foundation of empowerment that willpower, self awareness of personal authorship, is truly formed.

Children should be developing a growing awareness of their behavior and its consequences. They accomplish this growth by learning evaluation skills so that they can make judgments in terms of what behavior is desirable. They need to think in terms of behaviors that can hurt themselves or others; they also need to develop an awareness of things that can have a negative effect on school or private property. Teaching this awareness must go beyond simply the imparting and enforcement of rules. The children need

to develop an awareness of their behavior and its possible negative impact upon themselves or others. As a function of this growing awareness, children can learn to take responsibility for their actions. Ideally, they learn to take actions based upon their own evaluation and thinking processes.



The process of teaching values is critically important, as through it a multitude of other important objectives are being met. Through group analysis, discussion, and decision making, the process becomes more democratic and less authoritarian. Analyzing and thinking about potential harmful behavior helps develop actual reasoning and problem solving skills. Group participation and discussion help to develop the ability to think and share orally in a group situation. Values take on meaning as they are applied in specific activities, and thus become personal and relevant. Eventually, children experience a sense of belonging

and community within their group.

### **Independency**

The program is designed to enable the students to become relatively independent in terms of their ability to work on their own. Functionally, this means that the students invests energy, set goals for themselves, and completes them independent of teacher validation, pressure, or threat of negative consequences.

The independency continuum is constructed upon the premise that the child has personal nurturance and security needs met. The student, over a period of time, develops from being heavily dependent on the teacher and structure of the program to becoming more independent. Independency occurs because of the accumulation of successful learning experiences, the development of learning skills, and the developing awareness of one's own competency and self-sufficiency. The program defines a path from dependency to independency, which children travel at their own speeds. The program becomes less structured as children are able to impose increasing amounts of self structure. Progressive degrees of freedom increase as the children are able to make and act upon their own choices within the educational objectives. With the accumulation of positive affective learning experiences, the children's feelings of success and competency as a learner enables them to become more independent.

In terms of operational objectives, when a student is having some level of conceptual difficulty, he or she puts forth energy to try to understand before asking for help. The student is also able to complete longer and more difficult projects.



The dependency to independency continuum begins at Affective Level 1, characterized by considerable child dependency. The seven Affective Levels are each discussed later in this report. Through each affective level, the design of the program is developed to enable the child to become increasingly more independent. By the seventh level of the program, almost every student has become substantially independent, i.e. able to work on his own throughout most of the day with much less attention from the teacher. The independency continuum can also be seen as a measure of frequency of teacher contact and

reinforcement. At Level 1, contact is after every work unit, which is 3 to 4 times per lab; at Level 7, the frequency is once per lab.

## **Five Minute-Hour Time**

The most powerful element in the program is a daily one-on-one time that allows the teacher to work individually with each child for five minutes. Because of the power of this component in stimulating growth along the affective and cognitive continuums, it is call the Five Minute-Hour. During this time the teacher has no supervising responsibilities other than meeting the needs of that one child. The teacher can function as a discipler, a friend or counselor, as well as a teacher. The purpose is to meet the needs of that particular child whatever they may be. The cumulative effect of this time every day is very powerful in the life of that child. Because of the strong relationship that develops between the teacher and student, the dynamics of the classroom changes from a traditional program. The bond between the teacher and each child is stronger than the bonds between children within the classroom setting. The result is much less discipline and control problems. The design greatly enhances teacher job satisfaction, because not only does the system allow the teacher to powerfully foster growth with each child, but it also reduces some of the negatives of teaching, such as discipline problems.



In the twenty book Project Learning Series, pages called “Time With My Teacher” are bound in the back of each book for assessment and validation of concept mastery during the Five Minute-Hour time. Every time the children demonstrate mastery on an element of a concept, they are praised and validated. The child is given an inked Happy Face Stamp to place a happy face on the mastered element; this procedure leaves a documentation of mastery. At the point that mastery is not demonstrated, the teacher uses the one-on-one time to help the child gain mastery. This design truly facilitates individualized diagnostic-prescriptive education on the cutting edge of the child’s cognitive growth. The program is designed so that no child is put into a situation of failure because he or she does not have a solid foundation of concept mastery. The system structures powerful opportunities for growth along all character development continuums.

At Affective Level 5 and above, design of the computer program requires the student to demonstrate mastery on each concept or skill. The teacher is then able during lab or Five Minute-Hour time to help anyone having difficulty. Because the computer checks the student’s work, the teacher gains time to help with their writing assignments. Writing is a skill that requires time and effort by the teacher to facilitate growth.

Once per week, normally on Thursday, the teacher uses the Five Minute-Hour for the purpose of going over the student’s goal, work production, comprehension levels on each subject, and quality of work. During this meeting the teacher can use the print outs of work production and comprehension levels to provide feedback. Also, information can be displayed directly from the computer screen. This is a quality time for validation and recognition, plus a time for counsel and guidance, if necessary. The following day, on Friday, student awards are presented in a public ceremony at the conclusion of last lab.

## **The Seven Affective Levels**

### **Affective Level 1 – Project Learning Books 1 – 3**

The primary objective at Affective Level 1 is for the children to experience their own success as they complete a single assignment as defined by the Project Learning book. One of the theories of motivation in the program is the belief that every time person takes upon him or herself and completes it, there is an intrinsic sense of satisfaction. If at the same time, it can be recognized by a significant other, i.e., a teacher, the child will have a positive affective experience. The child



will have an experience that takes place in time and space that makes him or her feel good, feel competent, feel successful. Beginning at Affective Level 1, these experiences are created upon the completion of every learning exercise.

In Project Learning Book 1, every exercise is first completed with the help of the teacher in Five Minute-Hour time. The process enables the teacher to know that the child will be able to do the same exercise during lab time. This introduction to the learning program helps to assure success.

### Curriculum Components:

Project Learning Books 1-3: colors, shapes, environmental objects, manipulatives, pencil skills.

### Affective Level 2 - Project Learning Books: 4 – 8

Beginning at Affective Level 2, children learn to set a goal for themselves in terms of the number of learning exercise they are going to complete each lab. The first goal set by the child is normally 2 to 3 learning exercise per lab. This goal is based upon the average number of work units completed per lab in the previous three Project Learning books. As the work set expands, children grow in their ability to complete multiple learning exercises before raising their hand for the teacher. A Super Worker Award is presented on Friday in a group celebration to all children who achieve their goal during each lab for the week. All Project Learning Books at Affective Level 2 utilize support books which help teach numbers and letters. These books, called Fuzzy Books, are composed of five pages each displaying a large number or letter made out of tactile material. An audio cassette tape accompanies each Fuzzy Book. Self Esteem exercises are integrated into each Project Learning Book to help assimilate the positive affective experiences into the child's self structure. The design of the program enables each child to grow on all six character development continuums.

### Curriculum Components:

Project Learning Book 4: Numbers 1 - 5

Project Learning Book 5: Numbers 6 – 10

Dr. Franklin Book 1: The Human Body

Project Learning Book 6: Alphabet - Capitals

Dr. Franklin Book 2: Medical Practices and Disease





Project Learning Book 7: Numbers 1 - 20

Project Learning Book 8: Alphabet – Lower Case

Printing: Optional – Review of Numbers and Alphabet

### Affective Level 3 - Project Learning Books: 9 – 14

During Affective Level 3, children increase their work production on average by at least one work unit per lab. Children continue to be taught why every concept is relevant and important for their success. They also continue to develop work ethics and perseverance. The Super Worker-Standard of Best Award



helps teach children to always do their best work. The work set increases allowing the student to work for longer periods without teacher reinforcement. Beginning at Affective Level 3, multiple subjects are integrated into each Project Learning Book. All taped lessons on audio cassette are sequenced with multiple lessons on each tape. Upon entering a new book, an album containing all the tapes is checked out to the child. The process enables children to grow in their ability to work independently and assume additional responsibility. Self

esteem exercises expand to include drawing a picture of their own face having a positive affective experience. Four year olds at the preschool have two one hour labs each day. A fifteen minute drill period is structured into every lab.

#### Curriculum Components:

Project Learning Book 9: Numbers to 100, Phonic Consonant Sounds, and Self-Esteem

Project Learning Book 10: Addition, Time, Short Vowel Sounds, Vocabulary, and Self-Esteem

Project Learning Book 11: Addition, Time, Short Vowel Sounds, Vocabulary, and Self-Esteem

Project Learning Book 12: Subtraction, Time, Money, Spelling, Vocabulary, and Self-Esteem

Project Learning Book 13: Reading, Subtraction, Time, Measurement, Fractions, Spelling, Phonics, Self-

Esteem, and Vocabulary

Project Learning Book 14: Reading, Subtraction, Time, Measurement, Large Numbers, Spelling, Phonics,  
Vocabulary, and Self-Esteem

#### Affective Level 4 - Project Learning Books 15 – 20

During Affective Level 4, students take a significant step of growth along all the affective continuums. The continuums are highly integrated and intertwined weaving together investment of energy, goal directed behavior, value development, responsibility, independency, and self esteem. At this level the student is eligible to receive the prestigious Commitment to Learning Responsibility Award and be eligible for the Independent Studies Program. By taking this step of growth, the student must prioritize his or her goal over play time. Children commit themselves to continue to work up to ten minutes of their recess time in



order to complete their self assigned goal. If all the work has been completed by the middle of last lab, students can participate in Independent Studies. This program includes free reading and computer learning games.

Approximately, fifty percent of the students complete the twenty book Project Learning Series before entrance into first grade. Most first graders will complete the series during first semester. The variability in time is a function of age of entrance into the program, attendance, and learning rate. Some children take longer, but no child is ever compared to another child in terms of achievement rate or growth in the program. At kindergarten level, the students have three one hour labs per day, plus a thirty minute reading group. In first

grade and above, students have four one hour labs per day, plus the reading group.

#### Curriculum Components:

Project Learning Book 15: Reading, Vocabulary, Spelling, 2 Digit Addition and Subtraction, Large Numbers,

Fractions, Measurement of Length and Weight, Phonics, Manipulatives, Self-

Esteem

Project Learning Book 16: Review of Concepts

Project Learning Book 17: Reading, Writing, Vocabulary, Spelling, 2 Digit Addition and Subtraction, Large

Numbers, Fractions, Measurement of Length and Weight, Phonics, Manipulatives,

## Self-Esteem

Project Learning Book 18: Reading, Writing, Vocabulary, Spelling, 2 Digit Addition and Subtraction, Large Numbers, Fractions, Measurement of Length and Weight, Phonics, Manipulatives, Self-Esteem

Project Learning Book 19: Reading, Writing, Vocabulary, Spelling, 2 Digit Addition and Subtraction, Large Numbers, Fractions, Measurement of Length and Weight, Phonics, Manipulatives, Self-Esteem, and Vocabulary

Project Learning Book 20: Review of Concepts, if needed

## Affective Level 5 – Learning Pathway

Affective Level 5 is defined in part by a curriculum management system called Learning Pathway. The management provides a continuous growth experience for the student along the six Affective Continuums. When students take the step of growth from the Project Learning Series to Learning Pathway, they are given individual books for each subject area rather than one totally integrated Project Learning Book. This adds a dimension of growth and responsibility for the student. The student is given a Math 1 book, reading book, language arts book, writing book, plus continues in typing, math facts, and the vocabulary-spelling program.



The structure and design for Learning Pathway, Learning Schedule, and Independent Learner computer management systems is made possible by a sophisticated computer network and software program. The software program, which was years in design and development for this specific application, is called Kirkwood Program. At Affective Level 5, most students are placed on one of three different tracts. The curriculum is the same, but the sequence varies enabling the teacher to space the demand for writing, language assistance, and monitoring. However, the

program has the capability of complete individuation of curriculum and tract sequence. If a student is behind in a particular subject area, that area can be prioritized giving more time and exercises.

At this level, the student is eligible for the Learning Pathway-Educational Excellence Award. To earn this valuable award, the student must commit to achieving his or her goal every lab, even if that means continuing to work after lab or taking work home for completion. The student in essence is taking a substantial step of growth by willfully prioritizing his or her commitment to learning over play. Most of the time the student does not complete the goal is because of lack of effort. As such, he or she is allowed to work an extra ten minutes after lab to complete the goal. As a reward for taking this step of growth, the student is allowed to work in the Independent Studies Program the last thirty minutes of last lab. During this time, the student can select free reading or choose a computer program selected for Independent Studies. There is numerous fun learning network programs that have been purchased for this purpose.

Beginning at Learning Pathway, students grow in responsibility by doing home work three evenings per week, plus one session on the weekend. The home work assignments are designed to take approximately ten minutes. A typical assignment includes one vocabulary-spelling lesson, one reading story, and a math page. The beauty of the Kirkwood Program is that the student does the work at home exactly the same as in the classroom at school. At anytime in the evening, the student logs in from the home computer. The assignment is presented exactly as though he or she were at school. The assignment and comprehension level is tracked in the student's data base. The child grows in responsibility and independency by completing assignments at home. The process requires the student to take the necessary classroom books home, plus return them the next day.

**Curriculum Components:** When students advance to Affective Level 5, Learning Pathway, they are given the following curriculum:

**Reading** - The reading curriculum consists of three commercially published programs integrated together to form one reading curriculum path. A Beka, Bob Jones, and Steck Vaughn reading books have been sequenced from first through sixth grade. The total number of books in the curriculum path is 58. A Beka and Bob Jones were selected primarily because of the moral and spiritual values of the stories. Steck-Vaughn Reading Comprehension series, which is used in the Homework Program, was integrated because of instruction in the following comprehension components: Main Idea, Facts, Context, Sequence,



Conclusion, and Inference. When reading is assigned according to the sequential curriculum tract, a picture of the student's reading book appears on the computer monitor. The title of the story and page numbers are also displayed. The task is for the student to carefully read the story. Upon completion, the student presses the "continue" button for the first comprehension question to appear on the screen. It should be noted that there is a five-minute delay from the time the assignment is given until the student can access the comprehension questions. This encourages the student to carefully read the story rather than simply hunting for the answers. Eight comprehension questions have been written and inputted into the computer for each story. There are an estimated 20,000 questions in the reading continuum. So after the student reads the story, each question appears sequentially for the student to answer. If correct, a smilee appears, and the score is recorded in the individual student's database.

**Math** - Beginning at Affective Level 5, the student begins a series of math books specifically designed for the program. The computer program tracks each student, so that when math is assigned, the picture of the math book and page number appears on the computer monitor. Every concept taught is video streamed to the student at the point in the curriculum path in which the concept is introduced. On the video, the importance and value of the concept to be learned is stressed. The concept is carefully and clearly taught along with application to problems the child will solve. The video instruction walks the student through the first four problems in the workbook helping to enable the child to gain mastery of the concept. Upon conclusion of the



video, the student will complete the remainder of the problems on the page. Once completed, the computer automatically asks each problem in sequence for the student to enter the answer. If the answer is correct a happy face and positive validation is immediately given to the student and the response is recorded in the student's database. If the answer is incorrect, the computer will display a warning sign indicating for the student to recalculate or make sure he entered the answer correctly. There are normally 8

problems per work page in the math book. The student must answer each problem correctly before advancing to the next problem. There is a video replay button on the computer screen at all times enabling the student to replay the instructional video if needed. The program enables the teacher and administration to track concept mastery upon the completion of each work page. Because of the immediate feedback to the teacher, if the child is having difficulty on the concept, the teacher can provide additional instruction to assure mastery. Concept mastery on all subjects can be displayed instantly on the teacher's computer monitor and all administration computer monitors.

**Vocabulary – Spelling:** The vocabulary-spelling program, which begins at book 17 during Affective Level 4, continues through Affective Level 5, Learning Pathway. The vocabulary-spelling program consists of approximately 4,200 words. The first 520 words are also taught in Project Learning Books 17-20. This

provides a dual curriculum path enabling the student to master the words through the taped lessons as well as the computer program. According to the design of the vocabulary-spelling computer program, five words are taught in each lesson. The program first displays the word phonetically, for the student to sound out. The computer then gives the child feedback by phonetically pronouncing the word. Then the student is asked to say it again, followed by the computer repeating the word using normal speech. After the child has sounded out and read the word, its definition is given along with synonyms and antonyms where possible. Finally, the word is used in a sentence. Upon the completion of word meaning and usage, the student is asked to spell the word. The computer orally gives the child the word first phonetically then in normal speech. After the child has typed in the letters of the word and the enter button is pressed, the computer will give a positive oral validation plus display a happy face, if correct. If the child misspelled the word, it will be displayed indicating the correct spelling. The child is then asked to spell the word again. This process is repeated until the child has correctly spelled the word. After the procedure has been completed for all five words, each word is presented orally for the child to spell; a multiple choice definition test follows, than a test of synonym and antonym. Upon completion of the test, the words correct are displayed on the computer and entered as correct in the student's database. Any word misspelled or definition incorrect is recycled to the next lesson. After every twenty words, a review lesson is programmed. Any word missed in the review lesson is repeated in the next group of five words. The process helps to guarantee mastery of all the vocabulary spelling words in the program.



**Writing** - There are three primary objectives of the writing program. First, the program is designed to stimulate thought and critical thinking skills. Short essays and a legion of subjects structured around questions are used to help the student grow in his or her ability to think. Many of the subjects deal with human relationships, work ethic, spiritual themes, self-image and self esteem. The second objective is to help the child assimilate and integrate the values taught in the program into his or her self-structure. It is believed that as the child thinks through specific ethical situations that values previously taught will be applied to these situations. The result is growth in value and character development. The third objective of the writing program is for the student to grow in his or her ability to express those thoughts into written words. One of the primary focuses of language arts is to teach children to express their thoughts in written word. The purpose of teaching grammar, vocabulary, and spelling is to provide the tools for communication of thought through written language to others. A corollary objective is for the student to develop good penmanship. This is part of the student learning to complete work that represents his or her very best. The development of writing skills requires the student to spend considerable effort in critical thinking. Critical thinking is a skill that develops with time, effort, and practice. For many, writing is one of the most difficult subject areas. The student is taught that the more effort and practice invested in a subject, the better and the easier it

becomes. Because of the level of effort involved, writing is given first priority for students who have the greatest challenge. As such, writing becomes the first subject in the first and third labs. Students who find writing easier are scheduled to have it as either the second or third subject in labs 1 and 3. Under normal circumstances, the student writes the rough draft for the assigned essay during first lab and the second or final draft during third lab. It should be recognized that the development of writing skills is also very labor intensive for the teacher. Part of the reason for developing the Learning Pathway management system and curriculum is to free the teacher to invest more time in helping each student develop good writing skills. At this level, much of Five Minute-Hour time is devoted to this purpose.

**Language Arts** - Language Arts continuum begins in Affective Level 4 with curriculum components in punctuation, capitalization, and writing. Beginning at Affective Level 5, the student starts a series of grammar books providing instruction in parts of speech followed by sentence construction. The series contains a book on capitalization, two books covering nouns, two books of pronouns, two books on verbs, a book on use of the comma, a book on adjectives, and a book on sentence construction. The student normally completes two grammar pages daily. Upon completion of the grammar series, the student moves in to a language arts series developed by Steck-Vaughn. The students start with the third grade level workbook and progress through the sixth grade level. There are Steck-Vaughn books ‘C’, ‘D’, ‘E’, and ‘F’.

**Typing** - The typing program that began upon entrance into Affective Level 4 continues through the remaining Affective Levels. Called “Type to Learn”, the program was developed by Sunburst, a Houghton Mifflin Company. The primary objective of the program is to teach keyboarding skills. Children progress through three levels from primary to intermediate to advanced. There are between 21 to 22 lessons at each level. Through the program most third grade students are able to type at 40 plus words per minute with 85% accuracy. As the students work through the lessons, they practice phonetic spelling patterns, inflection of adjectives and verbs, appropriate use of punctuation, words that are frequently misspelled, synonyms, antonyms, and other elements of written language.

## Affective Level 6 – Learning Schedule

Affective Level 6 is defined by a computer management system called Learning Schedule. This management system allows the students to select the order in which they do the defined curriculum subjects that are require for each lab. The curriculum subjects are defined but the order in which they are completed is determined by the student rather than the teacher. Because of



growth in responsibility, the student is rewarded with added degrees of independency and self-determination. Upon the completion of two work units beyond the goal for the lab, the student is allowed to spend the remainder of the lab time in the Independence Study Program. To be eligible for this step of growth after having been in Learning Pathway for a minimum of six months, the student must have been achieving a minimum goal of 8 work units per lab during the past six weeks and meet the criteria for being a good citizen.

**Curriculum Components:** In addition to the curriculum components introduced at Learning Pathway, second grade students who are reading at 3.5 grade equivalent are given the following curriculum sequenced from third grade through sixth: History, Cursive Writing, Geography, Christian Value Builders, and Science. If first grade students attain a fourth grade reading level, they are also placed in the advanced curriculum.

### Affective Level 7 – Independent Learner

Level 7 of affective growth affords the students added and significant degrees of freedom by enabling them to schedule their own day doing the required subjects in any order they choose. The subjects and work unit requirements are defined by the teacher and administration, but the order of completion is sequenced by the student himself. As with Learning Schedule, after completing two work units beyond the goal for the lab, the student is allowed to start Independent Studies. Another added benefit for the Level 7 is the supervised Internet access. Upon completion of work requirements, the student can choose other computer programs, read a book of choice, or access the Internet. To be eligible for this step of growth to Independent Learner, the student must have been achieving a minimum goal of 9 for the past six weeks, meet the criteria for being a good citizen, and have been in Learning Schedule for a minimum of six months. The student at this level has truly become an independent, self directed, highly motivated, successful learner.



## Academic Outcomes

In the program, academic achievement is seen as an outcome variable as a function of progress along the character development continuums. Academic achievement is the result of growth and success in the



affective domain. The reality is that the affective and cognitive domains are interdependent through the program. For example, on the investment of energy continuum, the objective is for children to become highly invested in terms of working to learn. In value development, the children learn to value their education, to feel and believe that every concept is relevant and important to their personal success. Children learn to become goal-directed in terms of the number of learning exercises to be completed during each lab and each day, and develop a high level of self-esteem and self-image based upon the structure and recognition of personal success in the program. The children learn to be responsible for the quantity and quality of their academic work. And finally, the children progressively become more independent in terms of being able to do academic work without constant teacher support. The primary focus is always on progress along the character development continuums, with high academic achievement the result.

### Stanford Achievement Test Scores

During the first week of May each year, Stanford Achievement Tests are administered to each child in the elementary school. The third grade results for the past eight years are shown in Table 5. The results over eight years indicate that third grade students have a grade equivalent of one and a half to two and a half years above grade level. The Stanford Achievement Test scores directly parallel the results of the Woodcock-Johnson Individual Assessment Test.

**Table 5**

**Third Grade Stanford Achievement Test Scores – The Past Eight Years**

Year	Grade	Level	Norms	T/READ	Read Voc	R. Comp	T/MATH	Problems	Proced	Spell	Language	Science	Soc Sci	Listen	BASIC	COMPLETE
1997	3	Pri 3	Spring	<b>5.91</b>	5.24	6.56	<b>6.55</b>	5.87	8.31	6.54	7.18	8.69	6.53	5.11	<b>6.49</b>	<b>6.29</b>
1998	3	Pri 3	Spring	<b>4.99</b>	5.80	4.69	<b>6.79</b>	7.36	6.87	6.54	10.39	5.04	6.33	8.93	<b>7.67</b>	<b>6.69</b>
1999	3	Pri 3	Spring	<b>6.58</b>	6.10	6.51	<b>6.69</b>	7.01	7.09	7.09	6.49	5.46	5.99	6.00	<b>6.52</b>	<b>6.00</b>
2000	3	Pri 3	Spring	<b>5.01</b>	5.01	5.42	<b>4.34</b>	4.63	4.31	4.63	4.90	5.22	4.97	4.33	<b>4.66</b>	<b>4.91</b>
2001	3	Pri 3	Spring	<b>6.53</b>	6.19	7.25	<b>5.47</b>	6.45	4.81	7.96	7.45	5.23	6.16	5.60	<b>6.47</b>	<b>5.92</b>
2002	3	Pri 3	Spring	<b>5.49</b>	5.06	6.16	<b>5.42</b>	5.63	5.92	7.30	5.75	4.94	4.94	5.43	<b>5.86</b>	<b>5.34</b>
2003	3	Pri 3	Spring	<b>5.20</b>	5.44	5.64	<b>5.35</b>	5.82	5.56	7.12	5.79	5.60	5.62	4.56	<b>5.57</b>	<b>5.56</b>
<b>Averages</b>		Pri 3	Spring	<b>5.67</b>	<b>5.55</b>	<b>6.03</b>	<b>5.80</b>	<b>6.11</b>	<b>6.12</b>	<b>6.64</b>	<b>6.86</b>	<b>5.70</b>	<b>5.80</b>	<b>5.71</b>	<b>6.18</b>	<b>5.82</b>

## Woodcock-Johnson Individual Assessment Test

At several predefined levels of the program, children are individually administered the Woodcock-Johnson Individual Assessment Test. This test calibrates grade equivalency based solely on concept mastery without factoring in age. The test is currently being administered at the completion of Project Learning Book 20 (kindergarten or first grade) and in May to third graders. Table 6 indicates the results: students consistently score above grade level.

**Table 6**

### Woodcock-Johnson Test Results

Level	Norms	Letter-word Identification	Passage Comprehension	Word Attack	Reading Vocab.	Calculation	Applied Problems	Quantitative Concepts
Project Learning 20	F/S	2.66	2.55	3.11	2.08	2.32	1.87	2.00
3rd Grade	S	5.58	5.41	10.81	5.89	5.86	5.56	4.68

## Longitudinal Studies

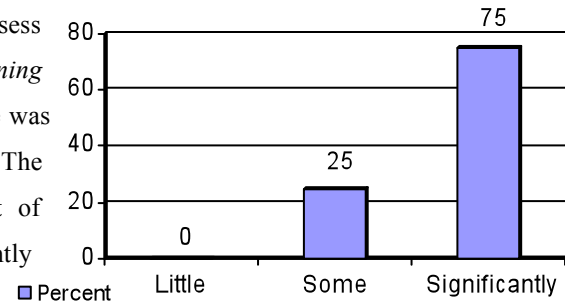
Since academic achievement is seen as an outcome variable as a function of growth in the affective domain, long term continued educational success could only occur if a solid life changing progress had resulted from the program. If the foundation of affective growth was weak, a washout effect would result and no significant long term effects would have taken place.

In order to assess the long term effects of the program, four longitudinal studies have been conducted. Parents of graduates through middle school were mailed a survey to complete and return. The studies were conducted in 1989, 1992, 1995, and 2002. In the last two studies, high school and college students were asked to fill out the surveys themselves. The response rate for the surveys was 53%. The results of the four longitudinal studies were highly similar.

## Outcomes

First, parents and graduates were asked to assess how much the child's or their experience through *Learning Pathways* impacted his or her level of success. The scale was a three point Likert Scale from little to significantly. The mean for all children was 2.75. Seventy-five percent of parents or graduates believed the program significantly impacted their child's or their level of success.

**Table 7**  
**Success as a Result of Learning Pathways**

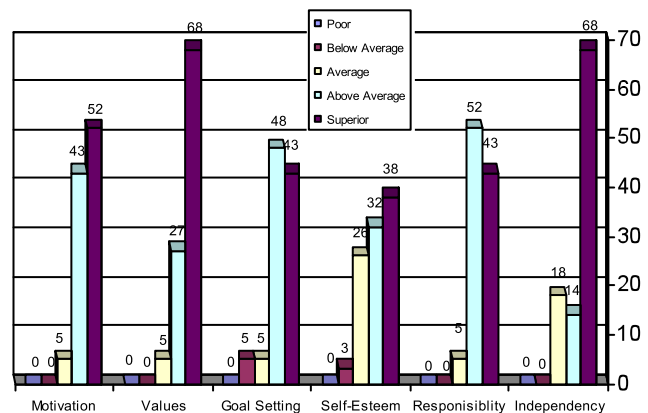


**Table 8**

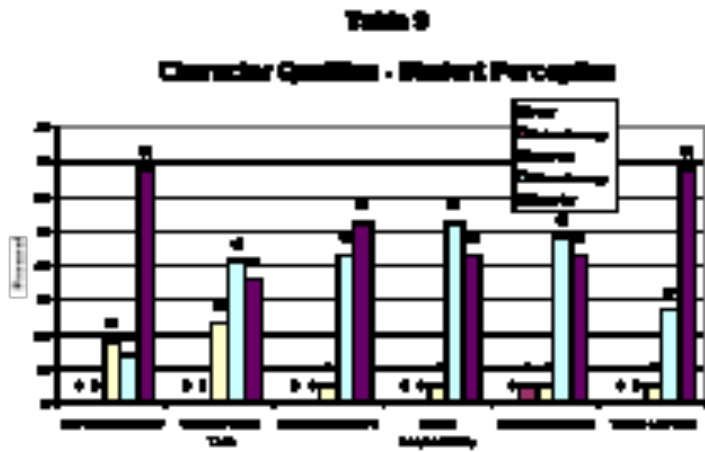
### Character Qualities-Parent Perception

As Table 8, "Character Qualities – Parent Perception" reveals, parents rate graduates of *Pathways to Success* very highly on each of the character development continuums.

For example, 84% of students are rated above average or superior in their motivation to learn, while 86% are rated above average or superior in

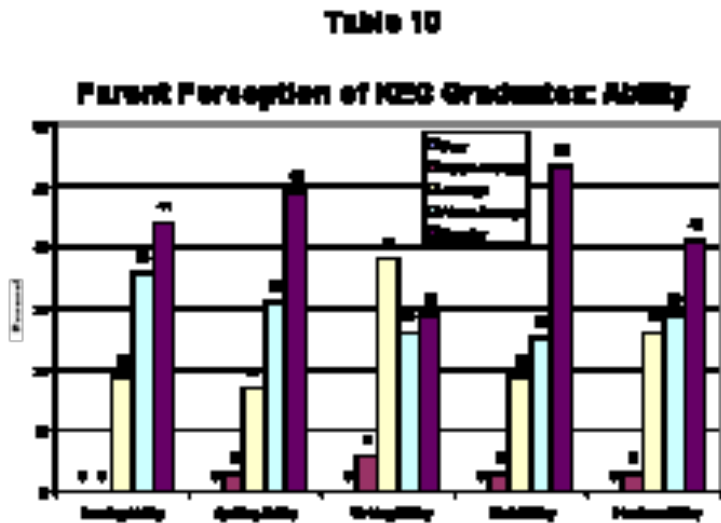


their valuing of learning. Similarly, graduates rate themselves highly on these measures.

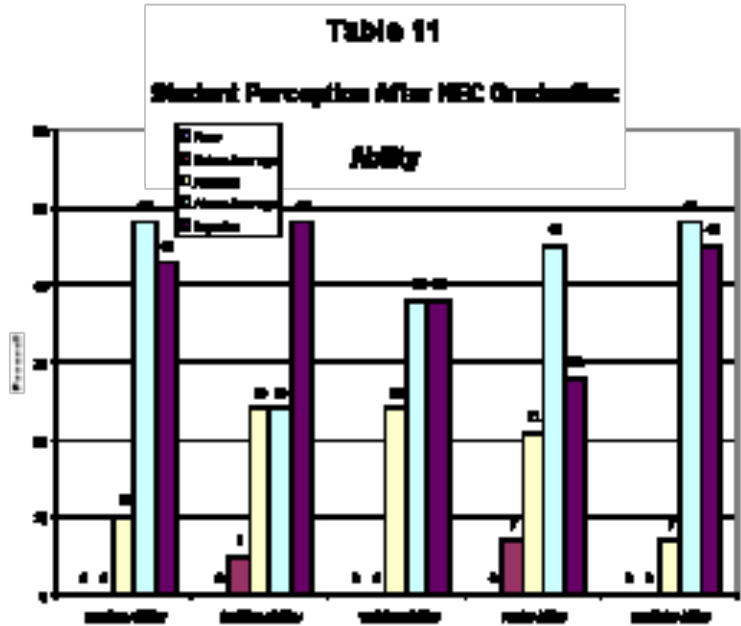


As Table 9, “Character Qualities – Student Perception” shows, 68% rate themselves superior in the ability to work independently, and 95% rate themselves above average or superior in their valuing of learning.

The linkage between affective development and academic performance is documented by further self-reporting instruments. Table 10, “Parent Perception of KEC Graduates: Ability” shows that parents rate their children very highly on their current academic performance: 80% of graduates are rated as above average or superior in reading and spelling, and 78% are rated above average or superior in mathematics.



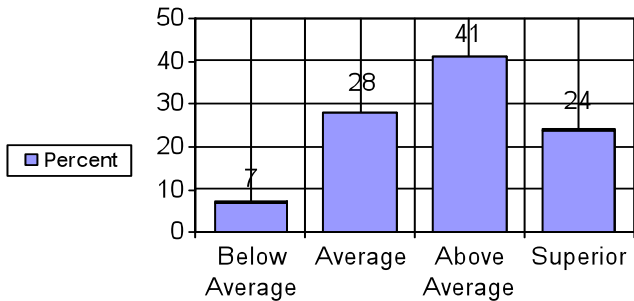
The graduates themselves are even more confident in their abilities, as Table 11, “Student Perception After NEC Graduation: Ability” shows. In the areas of language skills, 91% rate themselves as above average or superior in reading ability, 76% as above average or superior in writing ability, and 93% above average or superior in English ability. The last survey revealed that 100% of the graduates plan to attend college.



To determine how well the program influenced student attitudes and performance over the long term, graduates of the program who were then high school and college students were asked to fill out surveys reporting on their current academic success. Among high school students, the mean grade point average was 3.68, while among college students the mean GPA was 3.47. Mean Scholastic Assessment Test (SAT) score was 1217.

**Table 12**

**Spiritual Life and Growth**



Finally, high school and college students were asked to evaluate their spiritual life and church attendance. Sixty-five percent of the students rated themselves as above average or superior in their spiritual life. The same percentage attended church on a regular basis. Since enrollment at the schools does not have a religious

requirement, and it is estimated that less than 50% of the children’s parents were active in any church, the results indicate a level of continued success in the area of spiritual growth.

The results of the longitudinal studies are significant in validating the success of the program. *Pathways to Success* enables children to become highly successful in their education.

## **Conclusion**

Thirty years of development has enabled *Pathways to Success* to help make Wilson Riles' vision of education a reality. The program produces students who "...by the end of the primary level are excited about learning and able to proceed successfully with the rest of their education" (1971).

*Pathways to Success* has the potential of providing an affordable solution to Bloom's "2 Sigma Problem." The program enables many students to achieve "2 sigma" above the average student in a traditional classroom setting.

Lastly, *Pathways to Success* is a continuously developing program defined by the purpose of helping children actualize more of their tremendous God-given potential. The program is not by any means perfect or complete; it is limited more by our personal abilities than the limitations of children. If, over the next decade as much progress can be made as the last, hopefully children and education will be the beneficiaries.

## Bibliography

Bloom, Benjamin S.. (1984, May). The search for methods of group instruction as effective as one-to-one tutoring. *Educational Leadership*, 41 (8), 4-17.

Carrol, J. (1963). A model of school learning. *Teachers College Record*, 64, 723-733.

Kirkwood, William J. (1978). *The Development and Construct Validation of the Primary Pictorial Self-Esteem Test: Intellectual Development*. Unpublished Manuscript

Kirkwood, William J. (1984). *An Affective Model of Education*. Unpublished Manuscript

Kirkwood, William J. (1994). *Pathways to Success*. Unpublished Manuscript

Lazer, I, Darlington, R, Murray, H, Royce, T, & Snipper, A. (1983). Lasting effects of early education: A report from the consortium for longitudinal studies. *Monographs of the Society for Research in Child Development*, 47, (2-3, Serial No. 195).

Riles, Wilson, (1971). Report of the Task Force on Early Childhood Education. Sacramento, California  
State Department of Education