Running head: AMELIORATING THE EFFECTS OF POVERTY

"Look What I Can Do!" Ameliorating the Effects of Poverty with Preschool Education

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Abstract

Previous studies have documented the positive effects of early education in high-risk children. A screening measure was created to determine if there were any significant differences between the performance of scholarship and non-scholarship students at a local preschool. A new measure was created because none of the current developmental or psycho-educational measures met the needs of the program. Existing measures did not match the ages of the children in the program and they took too long to administer, required too much training, or were difficult to interpret. The new measure is composed of 130 items encompassing 4 areas of development: cognitive/language, motor, social/emotional, and adaptive/self-help. A subset of the items (that was relevant to the child's age) was given to the students twice this year. The students' scores increased significantly over time, which indicates that the students were learning new material throughout the year. Additionally, there were no significant differences (in either the total scores or the areas of development) between the scholarship and non-scholarship students at any point during the testing. This suggests that the early intervention is working to ameliorate the effects of poverty in this sample. Future studies should replicate the current one in order to obtain more data in a wider variety of subjects.

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History of Psychological Assessment

The function of psychological assessment is to "measure differences between individuals or between the reactions of the same individual on different occasions" (Nuttall, 1999). While the exact definition of assessment is not critical, it has been defined as "the use of scientific knowledge and methods in order to study the behavior of an individual" (Nuttall, 1999). Of more importance is that in some cases, assessment is meant to be a process (including formal testing) that helps to find solutions to various problems. For example a preschool assessment battery might be administered in order to determine why a child is not performing similarly to his or her peers. Other forms of assessment such as educational testing (GREs, SATs, ITBS) can be used to measure an individual's knowledge. To be effective, assessment must be multi-modal, multi-source, and multi-setting. Assessments should be conducted in a variety of settings and should rely on the opinions and observations of numerous sources (child, family, teachers, friends, etc) as well as formal testing, naturalistic observations, and the examination of records.

Assessment as a practice has been around for decades if not centuries, but preschool assessment is a relative newcomer to the field of testing. The first assessments were created in the nineteenth century in order to determine which children might benefit from a proper education and those who were unable to be taught (Bracken, 2000). Many scientists including Galton, Darwin, Wundt, and Cattell focused on different aspects of development (e.g., memory, motor functions, infant behavior, sensation, and perception) that would come to be incorporated into various assessment batteries. This need for the a

measure that examined all aspects of a child's development prompted Alfred Binet and Theodore Simon to create an IQ test to be used by the Paris Minister of Public Instruction to identify children in need of special education. Binet and Simon recognized several important methodological issues in intelligence testing that are still relevant today. They realized that tests of mental abilities had to be easy to administer and score, that they must include standard procedures to follow, and that they should provide results that distinguish normal children from those who exhibit delays.

By the early 1900s psychologists were advocating systematic testing of children and special placement with trained teachers for those who demonstrated limited abilities (Bracken, 2000). The majority of the tests developed during the following years were designed for school-age children. Fortunately, it soon became apparent that tests specifically designed to evaluate preschool children were needed as well. Nancy Bayley recognized this need and created the Bayley Scales of Infant Development, which is used to assess children from birth to beyond age 3 (Bracken, 2000).

Beginning in the 1960s there was an enormous growth in the testing of preschool children, primarily due to the actions of the federal government. The government funded the 1964 Maternal, Child Health and Mental Retardation Act, the 1964 Educational Opportunity Act, and the 1965 Elementary and Secondary Education Act. All of these programs provided for educational and social opportunities for the children growing up in poor families (Bracken, 2000). The Education for All Handicapped Children Act (Public Law 94-142) was passed in 1975 and it mandated that all school age children with disabilities must receive a free education in the least restrictive environment possible. The law was amended in 1984 and it required that schools provide services for preschool

children (ages 3-5) with disabilities. Additionally, states were given incentives to develop services for infants and toddlers with special needs (Bracken, 2000). It was during this era that Head Start was begun. All of these programs created a need for tests that could identify preschoolers who were having difficulty as well as program evaluations. Tests were developed that could measure achievement of the goals (affective, intellectual, psychomotor, and subject achievement) that were set out by Head Start Programs (Nuttall, 1999). The Head Start Program is a comprehensive child development program that serves children (birth to age five) in low-income families in order to increase school readiness. It provides services in the following areas: educational, medical, dental, mental health, and nutritional as well as encouraging parental involvement (http://www2.acf.dhhs.gov/programs/hsb/about/index.htm)

Benefits of Screening, Assessment, and Intervention

It is important to realize that there is a distinction between the terms screening and assessment. Screening involves the brief evaluation of a large group of children, so that those who need further assessment and intervention can be identified (Bracken, 2000). In contrast, assessment would involve the close examination of a particular child who has been identified by screening or by a teacher, physician, or parent.

The reason for early screening and assessment is simple and its benefits are numerous. As the nation moves toward a set of common goals in the field of preschool education, the importance of readiness for kindergarten increases. Thus, screening and assessment becomes even more important as they help ensure that children will receive the support necessary for them to succeed in school. Not only do screening programs identify for further assessment those children who have disabilities, they identify children

who without additional services are at risk for failure in school. Screening and further assessment can identify factors that could interfere with a child's learning and development, which allows school and community personnel to help children, and their parents determine appropriate education and health programs that will optimize development (Nuttall, 1999). However, there are a number of pitfalls in preschool screening and assessment of which one must be aware. There is concern about how applicable the disability categories that screening programs usually identify (such as mental retardation, hearing, speech, language, or visual impairments, emotional disturbance, autism, or specific learning disabilities) are for young children. In addition, some professionals worry that because the developmental domains in preschoolers are so interrelated that it could be difficult to make an accurate diagnosis. This could lead to misdiagnosis and inappropriate interventions/assistance (Bracken, 2000).

Despite the risks of early screening and assessment, the benefits of early intervention (which results from screening and assessment) are far greater, so it continues to be an important practice. As the environments of young children change, preschool screening and assessment can result in the early identification of problem areas and/or children who at risk of developing delays, ensuring that intervention programs can be designed and implemented before serious developmental consequences can occur. Trends that are indicative of high risk for developing delays such as being poor, being of a certain ethnicity, being the child of an unmarried teen, or having been a low-birth weight baby are on the rise, making preschool screening, assessment, and an ensuring intervention integral components of early childhood education. For example, early intervention is beneficial to children of low IQ mothers (Ramey & Ramey, 1992).

Without intervention these children are at high risk for poor intellectual outcomes (e.g., lower Standford-Binet IQ scores).

A positive preschool experience can serve as a very effective form of early intervention. For example, Reynolds et al. (2001) found that low income urban children who participated in a half day preschool program when they were three and four had a higher rate of high school completion, more years of completed education, lower rates of juvenile arrest and violent arrests, lower rates of school dropouts, lower rates of grade retention, and a lessened need for special education services. The effects were greater for boys than girls, especially in reducing school dropout rates. A meta-analysis of 38 studies done by Barnett (1998) found that early childhood education produces persistent effects on achievement and academic success.

Screening allows for the early identification of problems, which makes early intervention (and its tremendous benefits) possible. Without early screening, early intervention would not be possible and the at-risk children could reach grade school before they are aided which would be extremely detrimental to their development. Preschool screening programs have been in place since the early 1970s, but there is no such thing as a typical preschool screening program. Very few states give explicit guidelines on this topic, although many require it. Although little research has been done on the effectiveness of early screening, its value is clear.

Purposes of Preschool Screening

There are vast differences in the purposes of preschool screening. Some may be used to provide early childhood special education as soon as possible to all children with potential disabilities, while others operate on the premise that screening should only

identify children with significant delays. The variance in purpose leads to differing beliefs about how many of the children are in need of any assessment, causing vast differences in referral rates. Regardless of the purpose, a screening battery usually includes a number of components including: vision, hearing, growth, health history, and developmental screening (speech/language, cognitive, gross and fine motor, and social-emotional development). Some programs also include additional items such as dental inspection, nutritional screening, and laboratory tests (urine and blood analysis) (Nuttall, 1999).

Issues to Consider in Screening and Assessing Young Children

There are a number of issues that must be considered in preschool screening and assessment that are unique to testing within this age group. The preschool years are characterized by a rapid developmental growth that is not seen in any age group (Kelley & Melton, 1993 as cited in Nuttall, 1999). Many times this growth is both discontinuous and unstable (Bayley, 1989 as cited in Nuttall, 1999). The rates of maturation are very diverse among preschoolers (Culbertson & Willis, 1993 as cited in Nuttall 1999). This fact alone makes it difficult to design a comprehensive screening or assessment program that is both reliable and valid. Therefore, it is essential to consider skills on a continuum: emerging skills should be considered an extension or a complement to an already acquired skill.

Another problematic area in assessment that affects the validity of results is the behavior of young children. Preschoolers typically have short attention spans, high distractibility, high levels of activity, a low tolerance for frustration, and are likely to become fatigued quickly. Additionally, preschoolers are not likely to place a great deal

of importance on answering questions correctly, persisting on test items, pleasing the examiner, or responding to social reinforcement (Nuttall, 1999). All of these ideas must be taken into consideration in designing an assessment. The test activities must be engaging and entertaining, yet they must provide some valuable information to the examiner. With this in mind, one realizes that the test activities must appear to be fun to the preschooler, taking the test has to seem like a treat or else the preschoolers will have no reason to cooperate with the examiner.

The examiner her/himself poses yet another problem. In many cases, the examiner is a new and unfamiliar adult and preschoolers' reactions to strangers are diverse. If the examiner is not able to create an appropriate rapport with the child, the assessment is doomed from the start. If the child is afraid of the examiner or if the child views the examiner as playmate (someone who can be manipulated), the child is not likely to behave in his or her usual manner. The examiner must strike a balance between being formal (and someone who cannot be manipulated) and being fun and lively.

Characteristics of Screening and Assessment Measures

In order to be developmentally effective tools, screening measures and assessments must have a number of characteristics. They must be administered continuously; assessments cannot be given and interpreted in isolation of time or domain. They must be directed to all developmental areas rather than focusing on one aspect of a child's development. Thus, one has to consider all aspects of development including (but not limited to): motor, language, cognitive, emotional-social, and adaptive/self-help. Assessments have to be a collaborative effort between teachers, examiners, and parents. They all must work together in order to gain a better understanding of the child's skills

and/or difficulties. Assessment results should be helpful to the teacher as they plan to meet both the needs of the individual child and the goals of the program (Hills, 1992 as cited in Mindes et al., 1996).

There are numerous assessment tools that meet all of the aforementioned criteria and take into account all of the possible problems. For example, as mentioned previously, Nancy Bayley created the Bayley Scales of Infant Development to assess newborns up to children of age three. It assesses the children on both a mental and motor scale. There are numerous behavior rating scales such as the Child Behavior Checklist that ask teachers and parents about the behaviors of the child. There are also a number of psycho-educational measures such as IQ or achievement tests. The problem then becomes choosing a measure that meets the goals of the examiner (or the program) in a timely and cost efficient manner. One must take into account the needs of the program, the time it would take to assess a child, the number of children that need to be assessed, the training that would be required to administer the measure and countless other variables. Every program is in a different situation and has its own unique needs that must be met.

Screening and the Yellow Brick Road Early Learning Center

One such program is the Yellow Brick Road Early Learning Center, which is located in Lexington, Virginia. The school serves children from ages 6 weeks all the way through 5 years (pre-kindergarten). The children are divided into 9 classrooms, all of which have at least one teacher. The ages and education levels of the teachers vary considerably, but the majority have many years of experience working with children. The students that the school serves are just as diverse as its faculty. Thirty-six percent of

the children come from low income homes (with 16% below the poverty line) while others come from wealthy homes, some children live in the more rural areas of the county while others live in the city of Lexington, some are from single-parent households, others live with two parents, while some live with grandparents or other relatives. A few of the children could be considered to be gifted, others delayed, some probably have behavioral, learning, or emotional disorders, while other's are considered to be "normal." As mentioned previously, children from low-income families are at a higher risk for developmental delays, so screening and intervention in problem areas is crucial at this school.

With such a wide variety of children, there is inevitably a great deal of variation skill levels within each age group. It is vital that the teachers and the directors are able to quickly and accurately assess a child's progress, so that problem areas and at-risk children can be identified and so that interventions can be implemented. Unfortunately, none of the current psycho-educational or developmental measures are suited to this environment. Some like the Bayley do not encompass all of the age ranges, while others like the Brigance or the Batelle Development Inventory are too detailed and too complex to be administered and interpreted quickly for so many children. Additionally, many of these measures require that an individual be trained before they can administer the measure. The staff at Yellow Brick Road does not have the materials, training, or time necessary to use these measures. They need a measure that is fast, easy to administer, to score, and to interpret and that can be administered by someone who has some experience with children (but does not require a Ph. D. or lengthy training). The purpose of this study is to create such a measure. This measure will give the staff information about

whether or not children are meeting age-appropriate developmental goals in the motor, cognitive, language, emotional, social, and adaptive/self-help domains of child development. This information can be used to assess a child's progress as he/she moves through the program and to identify problem areas that can be worked on before the child even enters kindergarten. This information can also be used to compare the progress of children in various demographic groups, which can be helpful in attaining (or maintaining) funding from various federal, state, and local agencies.

The United Way is one agency that donates money to Yellow Brick Road. Currently the United Way gives Yellow Brick Road approximately $33,000 a year to be used towards student scholarships. Additional money is received from other agencies (such as Social Services) and donations and the total amount of scholarship money given each year approaches $80,000. These scholarships are awarded to children whose parents have a combined income of less than $60,000 a year (with the most aid being given to the children whose parents make the least money). Approximately 75% of the children receive some amount of financial support. It can range from almost full support from Social Services to $13 a month. For this academic year, tuition at Yellow Brick Road is $498 a month: the most YBR will pay is $311 while Social Services will pay up to $470. The financial support of the United Way was one of the primary reasons for the development of this measure. The United Way has required the implementation a plan for outcome measurement in each of the agencies that it funds. They identified target dates by which YBR must demonstrate that United Way funding was being used to achieve some long-term goals. By 2003, YBR had to show that their children from low-income families are prepared to enter kindergarten. Yellow Brick Road must be able to

provide evidence that indicates that 60% of children from low-income families have mastered behavioral outcomes for their age by 2004. By 2007, YBR must demonstrate that 90% of children from low-income families have mastered the behavioral outcomes for their age (P. Toney, personal communication, March 15, 2004). This measure will be used to gather the data that will determine if YBR has in fact met these goals. Some would say that other measures, such as kindergarten readiness tests, could be used to meet these goals but that is problematic for two reasons. First, those tests can only be used with the pre-kindergarteners while the YBR Screening Measure can be used with children of all ages. So one would lose the ability to track a child's progress throughout his or her career and would eliminate the possibility of early (before kindergarten) intervention. Second, the various elementary schools in the City of Lexington and Rockbridge County do not have a standardized kindergarten readiness assessment; each school relies on its own list of objectives. If one were to test each child based on the requirements of the school he/she is to attend then there would be no way to compare all of the children and critical data could be lost.

Creation of the Yellow Brick Road Screening Measure

To create such a specialized measure, the first step was to examine the already existing methods for assessment. The director had created a list of 51 "behavioral objectives" (that actually encompassed many of the domains of development) that a child had to master before he or she could move up to the next age group. For example, in order to move from the toddler room (ages 18 – 24 months) to the 2-year-old room a child must be able to eat with a fork and spoon, follow two part directions, etc. To enter into the pre-kindergarten classroom a child must be able to write his or her own name,

throw and catch a large ball, and know personal information (name, age, birthday, and family members). There was a list of objectives for each age group and as the child achieved all of the goals (as determined by continuous teacher observation) he or she was advanced.

There are a number of problems with this informal method of assessment that the current study intended to ameliorate. First, although the behavioral objectives encompassed areas such as cognitive/language development, motor skill development, emotional-social development, and adaptive/self-help development, there were a number of gaps in the varying age groups. For example, the objectives for the two and a half year old age group did not include any emotional-social goals and has very few cognitive outcomes; and although the pre-kindergarteners are required to meet the most objectives, there were no emotional-social goals for this age group. In order to fix this problem, I examined numerous lists of developmental milestones that children of a certain age should be able to meet. Some of the milestones came from textbooks or materials for parents while others came from other assessment batteries (e.g., Bayley Scales of Infant Development, the Developmental Assessment of Young Children, the Denver Developmental Screening Test, and the Hawaii Early Learning Profile). After collaboration with the director and numerous other professionals in the field of child development, a comprehensive list of approximately 130 objectives was created. In each of the age groups there are objectives that fit into each of the domains of development.

Having created the objectives, it was then necessary to determine how to test each one of them. Once again, the examination of other assessment measures was necessary. By combining these ideas with observations (of the children, the teachers, the setting, and

the atmosphere) at the Yellow Brick Road Early Learning Center, I was able to develop ways to test the objectives that would be easy to administer and to score. Many of the behavioral objectives listed on the director's sheets were somewhat ambiguous. It was difficult to determine exactly what some of the objectives were dealing with and it was even more difficult to understand how some of them could simply be observed (rather than tested on a one-on-one basis). By speaking with the director and other experts, these ambiguities were removed.

After the items were chosen a scoring method was developed. Each item has its own scoring system in order to maximize the developmental information gained about each child each time he or she is tested. Some items are scored on a yes or no basis while others are scored on a Likert scale with the point values corresponding to the number of questions answered correctly or the varying degrees to which a child can complete the skill. All of the answers on the score sheet correspond to a point value and a child's score is expressed as the number of points earned out of the number of points possible.

After the measure was developed, pilot testing was necessary in order to determine if the items seemed to measure what they were supposed to (high face validity), if the measure was in fact easy to administer, and if the scoring system was practical. The measure appeared to be designed well so pre-testing and then the first and second administrations of the test followed the pilot testing. Revisions of test items, scoring methods, and the administration of the test were constant throughout the testing process. Interrater reliability checks were performed on two separate occasions, with four different testers. Eighty-six items were administered to four different children and only two of those items were scored differently (items were scored the same 97.7% of the

time). There was a strong positive correlation between the scores of the different administrators ($r = 0.999$ which is significant at $p = 0.01$). Additionally, once testing was completed some of the children's scores on the YBR screening measure were compared to their results from the Denver Developmental Screening Test (to test for concurrent validity). The Denver is scored on a pass/fail basis so an actual correlation could not be computed. Two of the children who we had informed consent to test failed the Denver. The first child (a 4 year old male) refused to complete any aspects of the YBR screening measure on multiple occasions. This behavioral issue is certainly problematic and was probably part of the reason for his poor performance on the Denver. Thus by his refusal he was identified as a child who may need further attention. The second child (a 3.5 year old female) was tested during both administrations. Her scores were outside of the 95% confidence intervals (greater than 1.96 standard deviations away from the mean) in a number of categories. Her cognitive scores at time one and time two, her emotional score at time one, and her adaptive and motor skills at time two all fell outside of this range. Additionally, her overall scores at time one and two were outside of this interval. Thus we can say that there is a high probability that a child who failed the Denver will fall outside of the 95% confidence intervals. Therefore the YBR screening measure seems to have good concurrent validity, for both tests identified the same children as needing further assessment.

Hopefully, having an actual assessment tool will help to fix another one of the problems with the previous assessment program: that the assessment is done continually by teacher observation. Due to the fact that there was no actual assessment measure, the teachers are forced to observe the children constantly and move them up when judged

necessary, often by inaccurate means. This current method did not allow for the tracking of progress of individual children or the identification of specific problem areas. It also relied on the discretion of individual teachers, whose opinions might not always agree. The existence of this measure will allow for easy assessment a few times a year. Given that the new measure will have a specified list of objectives, directions for testing each of these objectives, and an objective scoring system, problems such as interrater reliability will no longer be a concern.

This new assessment also solved another one of Yellow Brick Road (as well as many other early learning center's) problems: not enough teachers to do everything one would want. By the time the teachers have taught the children the lessons of the day, played with them, supervised them on the playgrounds and at meals they have no time left to assess children. For this reason this measure was designed so that it could be administered by an outsider with little help necessary from the teachers. Any person who has had some experience with children and minimal knowledge of child development should be able to administer this test. This allows Yellow Brick Road to take advantage of one of its nearby resources, Washington and Lee University. Every year Yellow Brick Road has some student volunteers from the introductory level psychology classes. The measure was designed so that it could be administered effectively by a Washington and Lee student in a minimal amount of time with a minimal amount of training.

Methods

Participants

Forty-six children (29 males and 17 females) at Yellow Brick Road Early Learning center were tested. The students ranged in age from 6 weeks to almost 5 years.

There was considerable variation in the amount of time the child had spent at the school as well as in their demographic data. Eighty-seven percent of the students have spent their entire school careers at YBR. Three of the students who were tested spent at least one year at another school. Approximately 9% of the students live in a home where the average level of education among the adults in the home is high school graduate. Just over 30% of the students live in a house where the adults have completed at least some post-graduate work.

The students were divided into 4 categories according to how much financial aid they receive. Twenty-seven of the students (58.7%) receive no aid. Fifteen of the students (32.6%) who were tested have somewhere between 1 and 49% of their tuition paid for. Two students (4.3%) have between 50 and 99% of their tuition paid for and an additional two students are on a full scholarship.

All of the students will be tested according to their classroom age. The experimenter will determine which class the child is in and will administer the necessary items. If the child's classroom age and his or her chronological age (for example a child who has just turned four but is still in the 3.5 year old room) differ, then both tests should be administered. Both tests can be given on the same day as long as the child is still attentive and cooperative.

Materials

The Yellow Brick Road Early Screening Measure (See Appendix A for entire measure) was designed to assess the developmental status of children ages 6 weeks up to (but not including) 5 years. It is composed of 130 items and it measures a variety of age appropriate motor, cognitive/language, emotional/social, and adaptive/self help skills.

For example it assesses whether or not a 2.5 year old is able to wash his or her own hands independently. Each item has its own scoring system so as to best identify potential problems in development. Some items are scored on a yes/no basis while others are scored on a Likert Scale with the numerical score depending on how many of the questions a child is able to answer correctly/how well they are able to perform the skill/etc., each of which corresponds to a point value. All of the items contain one common coding assumption: the examiner is instructed to circle 0 if the child refuses to attempt the item.

Each child's score was expressed as a percentage of points earned out of the percentage of points possible. The child's total score is reflective of his or her current developmental status and can be used to compare children of the same age. This comparison allows for the identification of children who are delayed (as well as children who are advanced). Each child's total score was examined with regard to his or her demographic data in order to determine if any specific demographics (e.g. socioeconomic status) are correlated with delays.

Methods

When to Administer

Ideally, the measure should be administered to the entire student population at least three times a year (the beginning of the academic year, midway through the year, and near the end of the year). It should be administered whenever a new student enters into the program or prior to leaving the program as well as anytime a teacher, parent, director, etc. suspects that a child might be experiencing delays. Due to the fact that the screening measure was new this year and it took time to obtain parental consent, the

testing was only done twice (in November, December, and early January and again in March and April). All of the testing should be done between 9:30 AM and 11:30 AM in order to maximize a child's performance. However, it is often difficult to test during those times, so testing can be done in the afternoon after the children have woken up from their naps. Testing should not be done the days immediately prior to or following a vacation from school or a holiday (e.g., Halloween or Valentine's Day) or during a time in which the child's class is doing an exciting project. In addition, testing should not be conducted if the teacher reports that the child is not feeling well, is extremely tired, or in any type of mood that is not representative of that child's normal mood. In sum, every effort should be made to maximize the child's performance to ensure that any factor (other than the child's actual developmental status) does not lower a child's score.

Where to administer

In the youngest age groups (under 24 months), the assessment should be conducted in a quiet corner of the child's classroom (in order to minimize any distress that a change in environment could cause). The older children (two years and up) can be taken to the lounge next to the director's office or to the cafeteria. If the two year olds are distressed and will not leave the room with the examiner, then a familiar adult was asked to come to the testing area until the child appeared to be comfortable with the situation. The child was lead to a seat in a quiet corner where they do not have a view of what is going on in the kitchen, other classrooms, hallways, bathrooms, etc so as to minimize distractions. The chair and the table matched the child's size (when sitting in the chair the child's feet should be able to touch the floor). The examiner(s) ensured that

there will be enough room for the child to move around and should have all of the test materials necessary for that age group ready prior to bringing the child to the testing area.

How to administer

Before administering the test, informed consent was obtained for all of the students (see Appendix B). For all age groups there will be a number of observational test items that the child's teacher has to answer. These questions are listed after the test measures that the examiner(s) has to administer and they can be asked of the teacher before or after the testing session (depending on the availability of the teacher). After ensuring that nothing will preclude testing on that day and that the room is ready, the examiner(s) should introduce him or herself to the child and briefly explain what they will be doing (the actual explanation given will depend on the child's age) and lead them to the testing area. The examiner(s) should start with the first test item listed for that child's age (according to which age classroom the child is in). After testing and analysis of the results, the parents and teachers were informed of the child's status (see Appendix C for parental debriefing forms).

Results

Forty-six students took part in this study. Students were tested at two different points during the academic year. The first (time one) occurred during the months of November, December, and early January. The fact that testing occurred for so long was not ideal, but was necessary because of the holidays. The second testing (time two) occurred in March and early April.

First, a paired T-test was used to compare the scores for all of the children were compared at Time 1 (T1) and time 2 (T2) to determine if they increased over time. The

mean increased from 0.869 (SD = 0.11) to 0.928 (SD = 0.07) which was an increase of 0.059. This was in fact a significant difference with, $t(45) = -5.855$, $SEM = 0.010$, $p < 0.001$ (see figure 1).

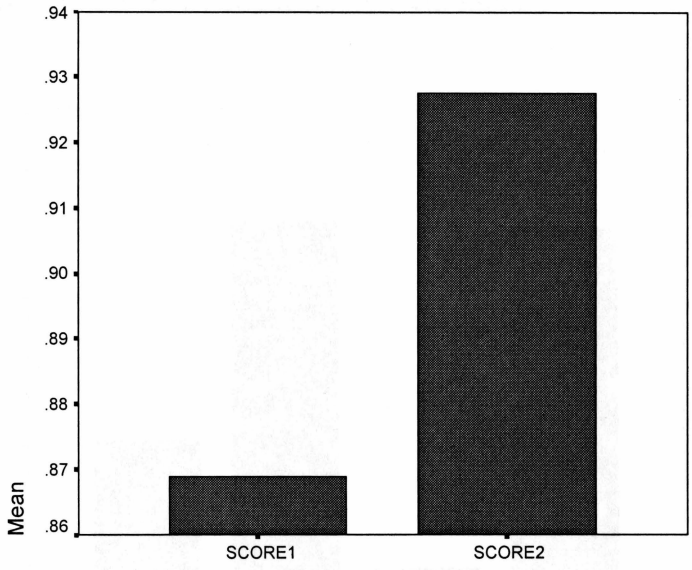

Figure 1. Mean Score at T1 and T2.

Then the domain subscores at T1 and T2 were examined. At T1, the adaptive scores were the highest, followed by motor, cognitive, and emotional (see figure 2).

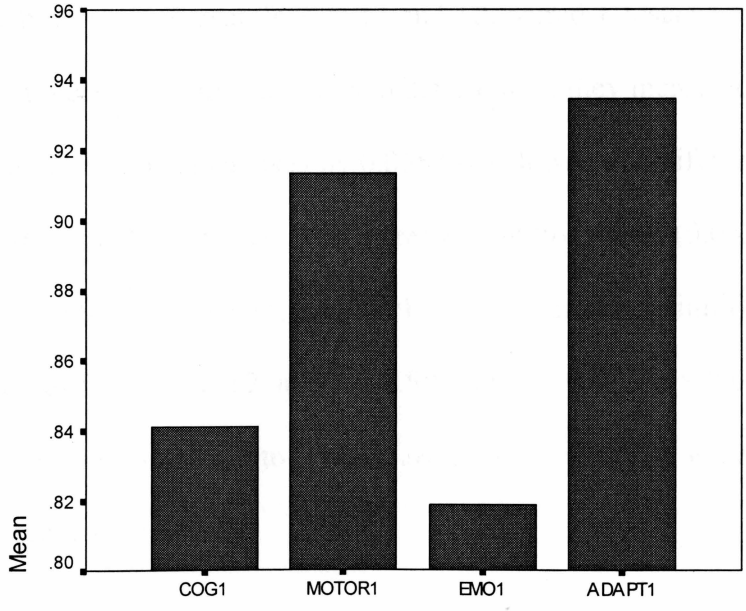

Figure 2. Domain Subscores at T1.

All of the domain subscores increased by T2 and a similar pattern in the scores was observed (see figure 3). The adaptive score was still the highest (although it was equal to the motor scores), followed by cognitive, and emotional.

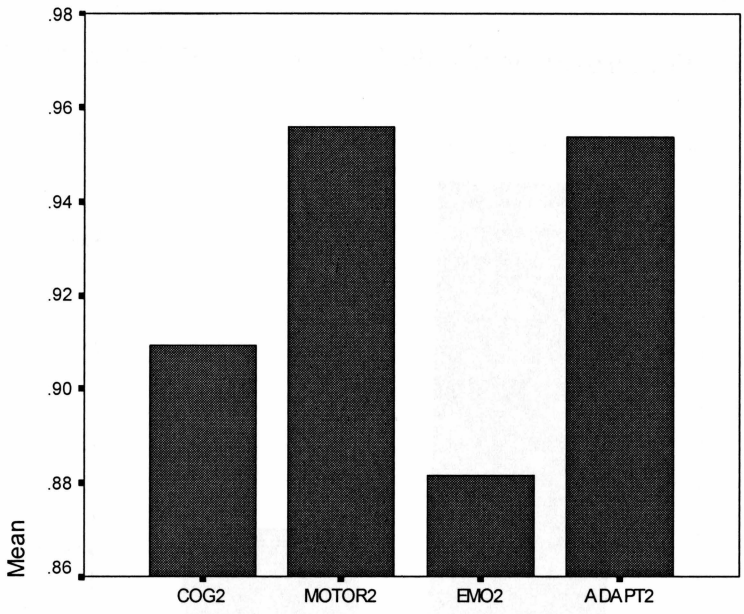

Figure 3. Domain Subscores at T2.

After the subscores were examined at T1 and T2, paired T-tests were then used to compare all of the subjects' domain subscores to determine if they increased significantly over time. The cognitive scores increased by 0.0682 which was a significant difference $t(45) = -3.702$, $SEM = 0.018$, $p = 0.001$. The increase in motor scores (0.0422) was also significant $t(45) = -3.909$, $SEM = 0.011$, $p < 0.001$. There was also a significant increase in the emotional scores from T1 to T2, $t(45) = -2.996$, $SEM = 0.021$, $p = 0.004$. The adaptive score increased from 0.9344 to 0.9538 (an increase of 0.019), which only approached significance ($p = 0.062$).

After the significant increases over time were noted, the improvement of the scholarship and non-scholarship students were examined separately using Paired T-tests to determine if there was a difference in how the scores changed over time. The scholarship students demonstrated a significant increase in their overall score from T1 to T2, $t(18) = -4.682$, $SEM = 0.014$, $p < 0.001$ (see figure 4). The mean increased from 0.865 ($SD = 0.107$) to 0.9328 ($SD = 0.068$), which was an increase of 0.0678.

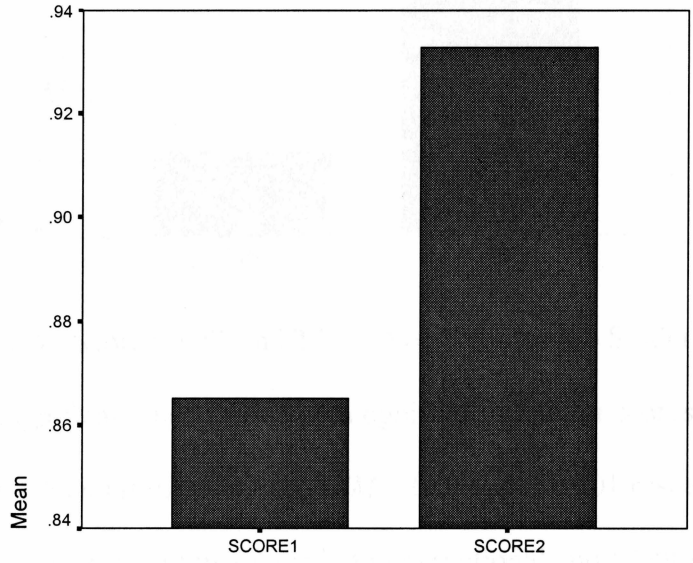

Figure 4. Scores at T1 and T2 for Scholarship Students

The emotional scores of the scholarship children increased significantly from T1 to T2, $t(19) = -3.603$, $SEM = 0.028$, $p = 0.002$. There was also a significant increase in their cognitive scores, $t(19) = -2.851$, $SEM = 0.032$, $p = 0.011$. Both the motor and adaptive scores increased, but the differences were not significant.

The non-scholarship students demonstrated a similar pattern. The mean of their overall score increased from 0.8175 ($SD = 0.123$) to 0.9328 ($SD = 0.068$), which was a significant increase, $t(27) = -3.794$, $SEM = 0.014$, $p = 0.001$ (see figure 5). There was no

significant difference between the size of the increase in the scores of scholarship children and the increase of the scores of non-scholarship children.

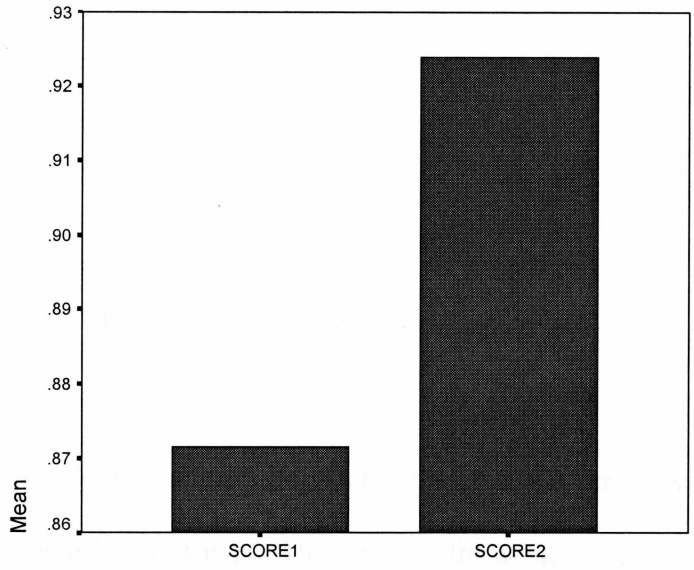

Figure 5. Scores at T1 and T2 for Non-Scholarship Students

There were significant increases in the cognitive and motor scores, $t(26) = -2.380$, $SEM = 0.022$, $p = 0.025$ and $t(26) = -3.683$, $SEM = 0.016$, $p = 0.001$ respectively. They also demonstrated non-significant increases in their emotional and adaptive scores. There were no significant differences in the amount of the increase between the scholarship and non-scholarship students in any of the domain subscores.

After it was determined that all students, regardless of their financial status, showed improvement in their scores over time we began to look for possible differences between the scores of the scholarship and non-scholarship students. There was no significant correlation between the average score (across T1 and T2) of the student and his or her financial status (see figure 6). This indicates that one's financial status is not associated, either positively or negatively with one's score on the YBR screening measure.

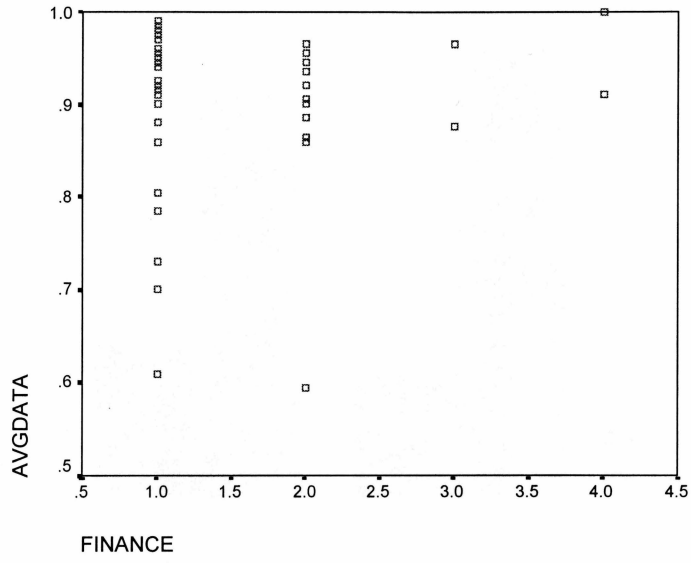

Figure 6. Correlation Between Finance and Average Score.

An independent-T test was used to compare the average scores [mean of the total score (sum of cognitive, motor, emotional, and adaptive) at T1 and T2]. It found no significant difference between the average scores of the scholarship and non-scholarship children. This indicates that the scholarship children are performing as well as the non-scholarship children overall. Due to the fact that high and low scores can balance each other out to reveal no significant differences between two groups, additional comparisons between the two groups were made. Another independent-T test found no significant difference in the scores of the scholarship and non-scholarship students at T1 or T2 (see table 1 and figure 7).

	T1 Mean	St. Dev	T2 Mean	St Dev	**Increase**
Scholarship	0.865	0.11	0.933	0.07	0.068
Non-Scholarship	0.872	0.12	0.924	0.07	0.052

Table 1. Mean Scores For Scholarship Non-Scholarship Children at T1 and T2

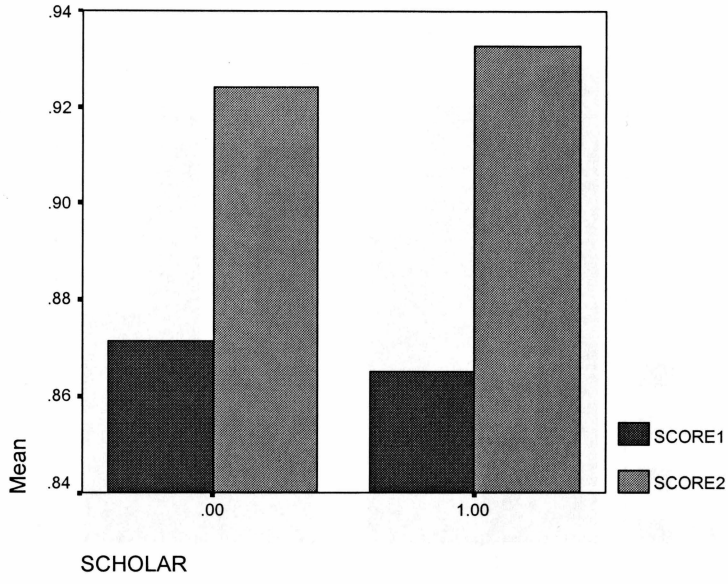

Figure 7. Scores at T1 and T2 for Non-Scholarship (.00) and Scholarship (1.00) Children

To further the analysis, the domain subscores were examined. There were no significant differences in the any of the domain (cognitive/language, motor, emotional/social, adaptive/self-help) subscores at T1 or T2 (see Figures 8 and 9).

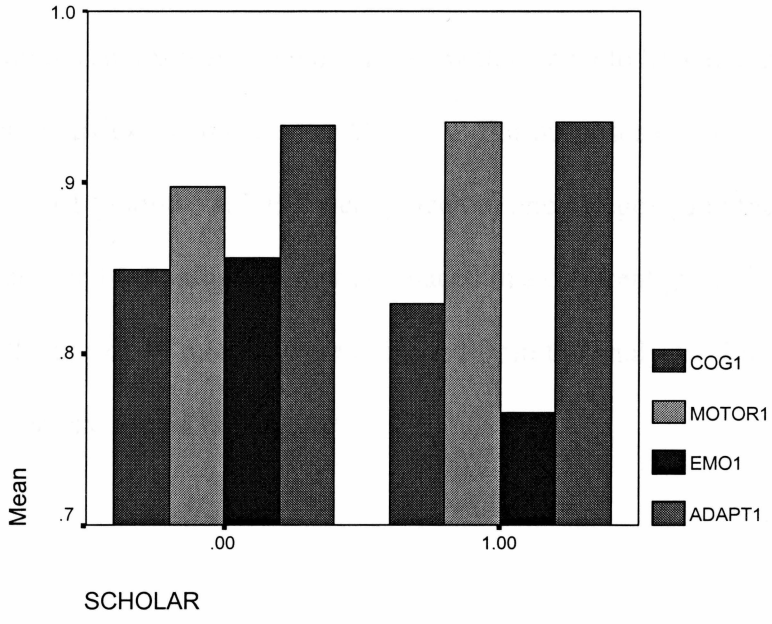

Figure 8. Domain Subscores at T1 for Non-Scholarship (.00) and Scholarship (1.00).

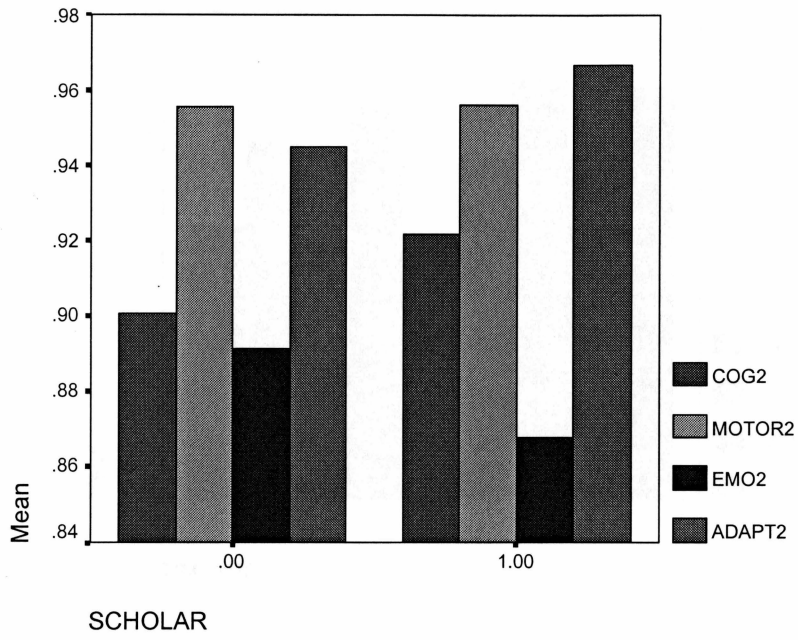

Figure 9. Domain Subscores at T2 for Non-Scholarship (.00) and Scholarship (1.00).

There were some skills in which the scholarship children performed slightly better (motor) and there were some skills that the non-scholarship children scored higher on (emotional/social), but none of these differences were significant.

The children's scores were then examined with respect to how much time they have spent at Yellow Brick Road using an ANOVA. For purposes of analyses, children who spent more than 14 months at YBR were placed in one category and the children who had been there for 14 months or less were placed in a different group. Any children who were under the age of 14 months were excluded from the analysis. First the subscores at T1 were examined (see figure 10).

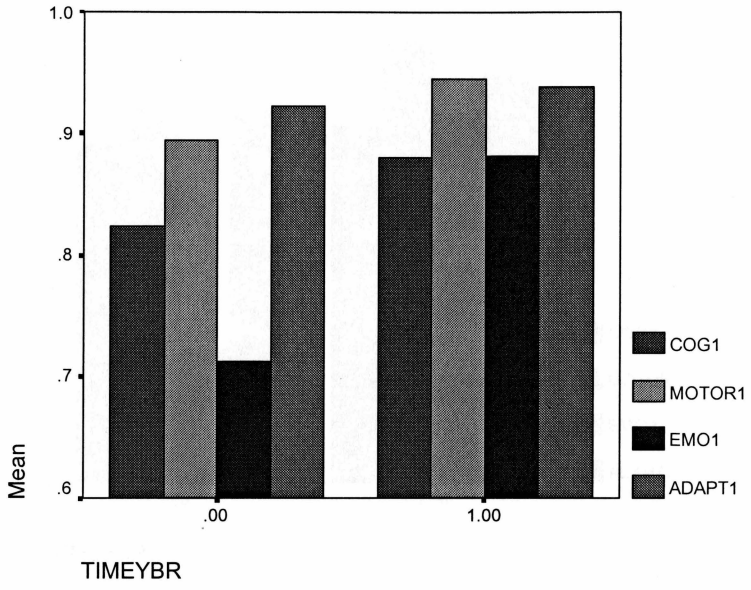

Figure 10. Subscores at Time 1 Based on Time Spent at YBR (.00 = 14 months or less, 1.00 = greater than 14 months).

Children who spent more time at YBR had a greater mean in all of the subscores, but the only significant difference was in the emotional domain. Children who have spent more time at YBR had a significantly greater emotional scores, where $F(1, 42) = 8.496$, $MS_e = 0.026$, $p = 0.006$. The children who had been at YBR longer had a mean of 0.881 ($SD = 0.13$) while those had been there for less than 14 months had a mean of 0.7125 ($SD = 0.25$). A similar pattern was demonstrated at T2. Once again the scores were higher for those who had been at YBR longer and the only significant difference was in the emotional scores, with $F(1, 42) = 8.507$, $MS_e = 0.230$, $p = 0.006$. The emotional mean for those who had been there for greater than 14 months was 0.9353 ($SD = 0.856$) and those who had been there less had $M = 0.7851$, SD = 0.249. It is important to note that the difference between the scores of the two groups was smaller at T2 than it was at T1 (0.169 compared to 0.150). Additionally, the differences in the motor scores approached significance at T2 ($p = 0.066$) (see figure 11).

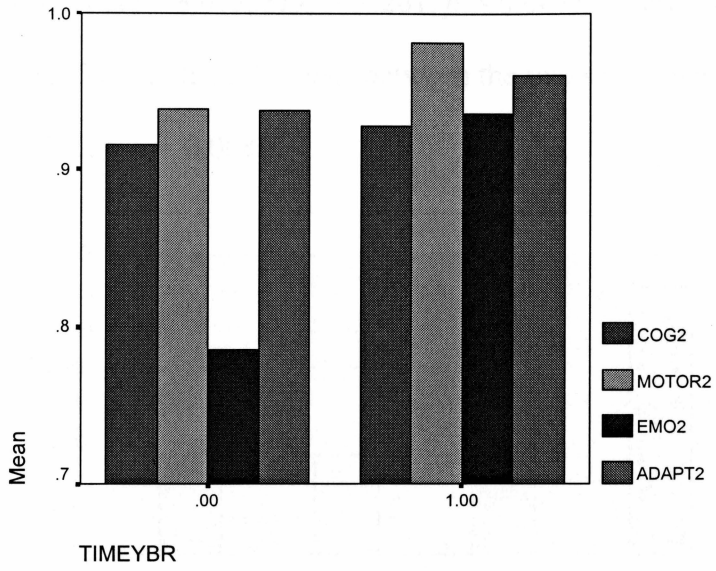

Figure 11. Subscores at Time 2 Based on Time Spent at YBR (.00 = 14 months or less, 1.00 = greater than 14 months).

The students were then compared according to their financial status and the amount of time they have attended YBR in order to determine if there was an interaction between the two variables. There was no significant interaction, however the overall score is affected by how long a student has been at YBR regardless of his or her financial status (see figure 12). The scholarship and non-scholarship students who have attended YBR for 14 months or less scored significantly lower (in their overall scores at T1) than the students (scholarship or non-scholarship) who attended YBR for 15 months or more where $F(1) = 7.273$, $MS_e = 0.088$, $p = 0.010$. There was no longer a significant difference by T2. A similar pattern was found for the cognitive and emotional domains. At T1 the difference between the cognitive scores of the students who attended YBR for 14 months or less and those who had been in school for more than 15 months approached significance ($F(1) = 3.284$, $MS_e = 0.104$, $p = 0.077$) and by T2 it was not even close to significant. At T1 the emotional score of the students who had been there for less time

was significantly lower ($F(1) = 8.013$, $MS_e = 0..261$, $p = 0.007$). There was still a significant difference at T2, but the difference between the two scores was smaller ($F(1) = 7.716$, $MS_e = 0.214$, $p = 0.008$).

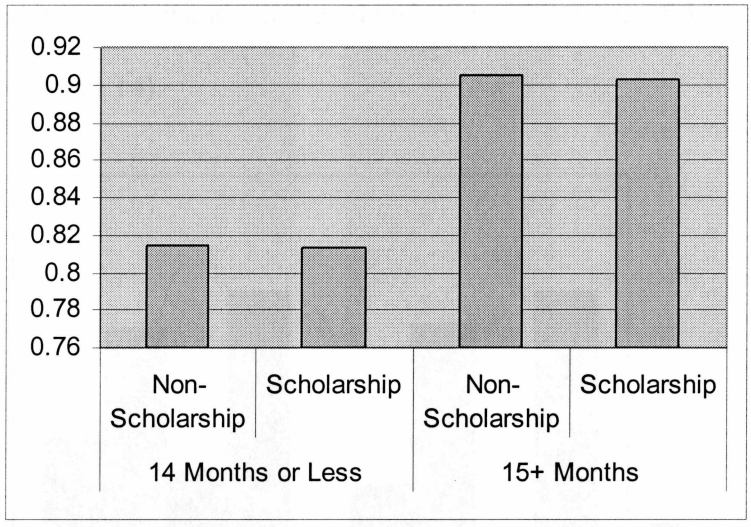

Figure 12. Overall Scores at T1 as a Function of Time at YBR and Scholarship.

The subject's scores were also compared with respect to their gender. There was no significant difference between the overall scores of the males and females at T1 or T2 (see figure 13).

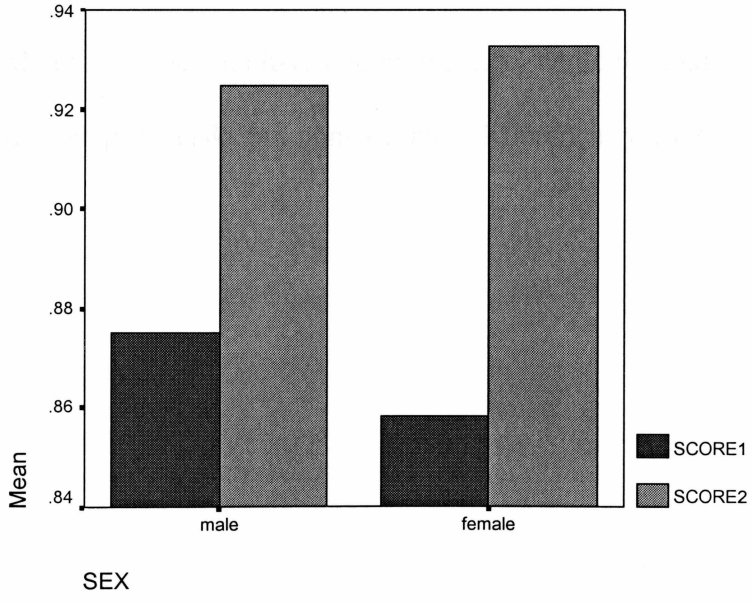

Figure 13. Scores at T1 and T2 for Male and Female Students

Even though there was no significant difference in the overall scores, the subscores were examined. At T1, females scored higher in the motor and adaptive tasks while males performed better in the cognitive and emotional tasks, however none of these differences were significant (see figure 14).

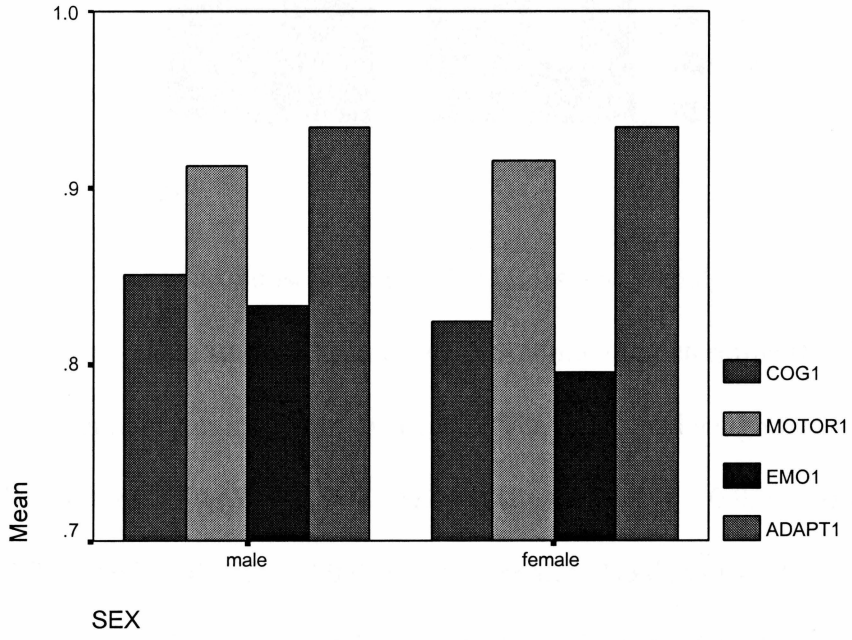

Figure 14. Subscores at T1 for Males and Females

At T2, females did better in the cognitive and motor tasks while the males scored higher in the emotional and adaptive tasks but none of these differences were significant (see figure 15).

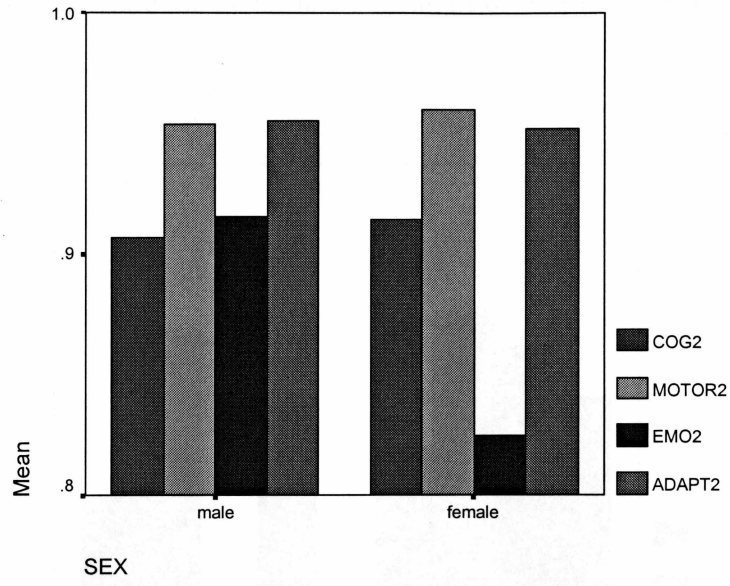

Figure 15. Subscores at T2 for Males and Females

The male and female students' scores were examined to determine if either group had a significantly greater improvement over time. The males had a significant increase in their overall score from T1 ($M = 0.8752$, $SD = 0.106$) to T2 ($M = 0.9241$, $SD = 0.069$) with $t(28) = -4.210$, $SEM = 0.012$, $p < 0.001$. The females also demonstrated a significant increase from T1 ($M = 0.8588$, $SD = 0.134$) to T2 ($M = 0.9335$, $SD = 0.077$) with $t(16) = -3.989$, $SEM = 0.019$, $p = 0.001$. Although the females improved slightly more than the males (an increase of 0.075 versus 0.049 respectively), there was no significant difference between these increases. As for the domain subscores, the females demonstrated a significant increase in their cognitive and motor scores while the males had a significant increase in the cognitive, motor, and emotional domains.

The scores of the different genders were examined within each age group. The only significant difference found between the 2 sexes was in the emotional score of the pre-kindergarteners at T1 as can be seen in figure 16. The females scored significantly higher in this area with $F(1,16) = 9.353$, $MS_e = 0.134$, $p = 0.008$. The females had a mean

of 0.9667 (*SD* = 0.082) while the males had a mean of 0.7883 (*SD* = 0.134) which was a difference of 0.178.

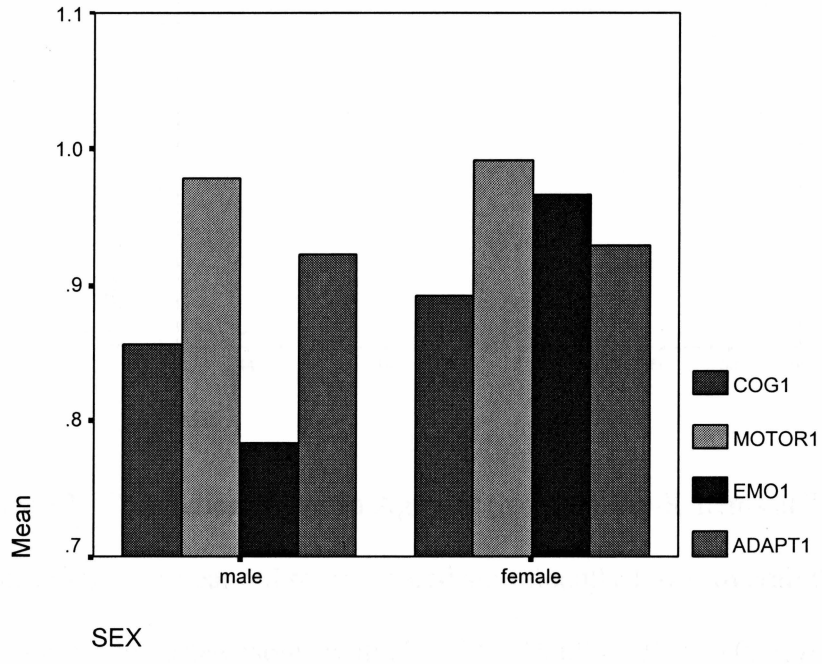

Figure 16. Scores for Male and Female Pre-kindergarteners at T1

All of the data that was used for the previous analyses were entered based on the child's classroom age rather than his or her chronological age. This was done because it would have negatively skewed the analyses because children cannot necessarily be expected to know information that has not been presented to them by the YBR teachers. However, all of the children were tested according to their chronological age in addition to their classroom age. A number of interesting comparisons were able to be made using this data. There were 7 children who were in a 3.5 year old classroom who had turned 4 by T2. These scores were compared to the scores of the 4+ year olds who had been in the pre-kindergarten rooms. There was a significant positive correlation ($r = 0.546$ which is significant at $p = 0.01$) between a child's chronological age (in months) and his or her total score on the 4-year-old items (see figure 17).

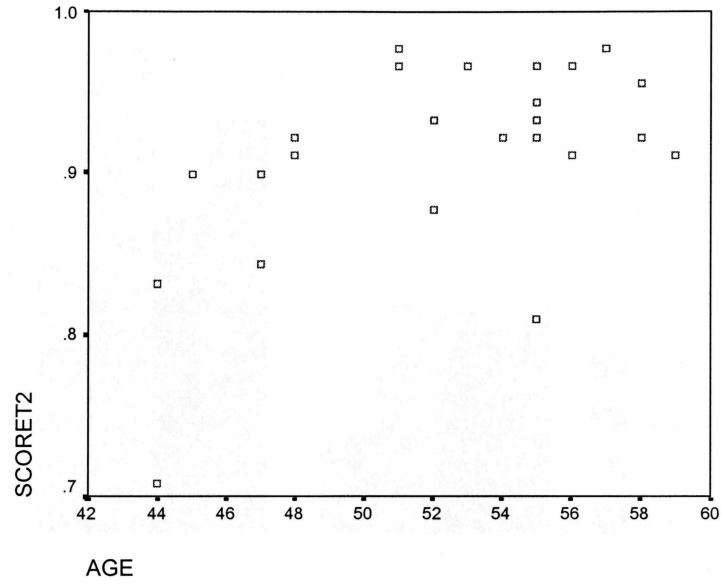

Figure 17. Correlation Between Age and Score on Pre-K Items at T2.

The children still in the 3.5 year old room, scored significantly lower overall than the children in the pre-kindergarten rooms with $F(1,23) = 10.098$, $MS_e = 0.027$, $p = 0.004$. The mean of the 3.5 was 0.8587 ($SD = 0.075$) and the mean for the pre-kindergarteners was 0.9326 ($SD = 0.041$). The children in the pre-kindergarten rooms scored significantly higher in three out of the four domains (see table 2 and figure 18): cognitive, where $F(1,23) = 4.860$, $MS_e = 0.022$, $p = 0.038$; motor ,where $F(1,23) = 19.382$, $MS_e = 0.027$, $p < 0.001$; and adaptive, where $F(1,23) = 8.449$, $MS_e = 0.055$, $p < 0.008$.

	Score 2		Cognitive		Motor		Emotional		Adaptive	
	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev
Pre-k	0.9326	0.041	0.9041	0.562	0.9912	0.027	0.9222	0.1	0.9603	0.05
3.5	0.8587	0.075	0.8375	0.093	0.8872	0.093	0.8857	0.107	0.8878	0.07

Table 2. Mean Scores at T2 for Pre-kindergarteners and 3.5 year olds (on pre-k test)

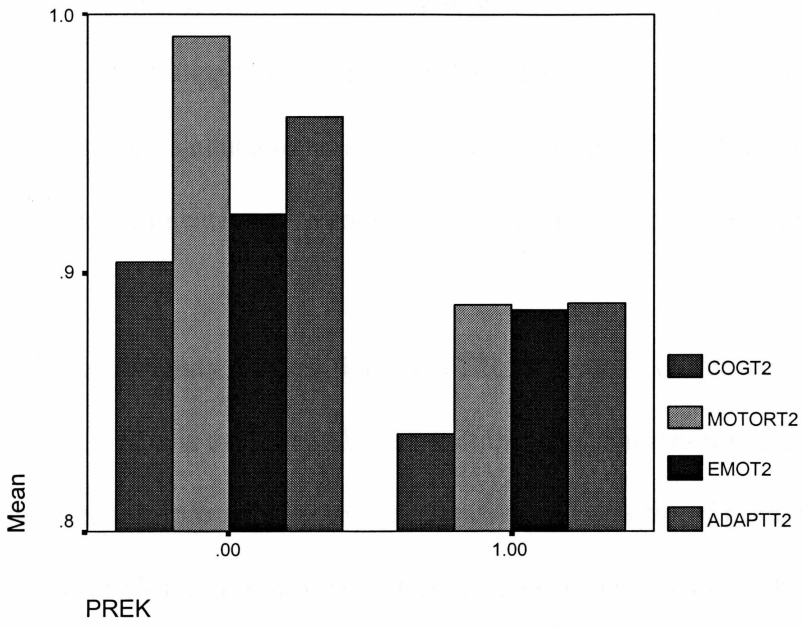

Figure 18. Subscores for Pre-kindergarteners (.00) and 3.5-Year Olds (1.00)

Discussion

The significant increase in scores over time indicates that despite all of its potential problems (not enough resources, large diversity in the student population, too many students to every teacher, etc) Yellow Brick Road is a successful preschool program. In all age groups, the children's scores are improving which indicates that they are in fact learning new cognitive and motor skills and are learning how to interact better with others and how to take care of themselves. It is interesting to note that as we speak YBR is incorporating new aspects into their program that may account for the increases in motor skills. In the past year they have added two new pieces of playground equipment (a balance beam and a hoop without a backboard that children can throw balls into) and introduced movement classes. The addition of these opportunities and other improvements may result in further student gains. Only time will tell the future benefits of this early learning and if these early strides will correlate with later educational

achievement. Currently researchers are working to determine if the cognitive effects of early education will persist long-term (Barnett, 1998). However, studies have found positive long-term effects on educational achievement and juvenile arrests for high-risk children who participated in early intervention programs (Reynolds, et al., 2001, Reynolds, 1992).

The data from this study suggest that the YBR program is extremely beneficial to the high-risk children. This is evidenced by the fact that the scholarship children demonstrated significant improvements in the cognitive and emotional domains, which are areas of concern for children in poverty (Barnett, 1998). The fact that their scores are not significantly different from those of their peers indicates that early learning is working to ameliorate the effects of poverty. Past research suggests that children in poverty do not do as well as their peers, but this is not the case at YBR. Perhaps this is due to the fact that the majority of the children who were tested, even those who were from low-income families, had attended YBR for well over a year. The original comparison between the children who attended YBR for greater and less than 14 months revealed no significant differences between the two groups, which suggested that time at YBR may not be a factor and perhaps the children in poverty were doing as well as their peers even before entering the program. However, 14 months is a fairly large amount of time during which a significant amount of progress could have been made. This indicated that the children had been in the program long enough for it to make an impact on multiple aspects of their development. Unfortunately, there were too few children who had been in the program for less than a few months so further comparisons were not possible. We would have been more likely to find significant differences between the

scores of scholarship and non-scholarship children if we were able to measure the children immediately upon entry into the program. Upon entry into the program, we would expect the non-scholarship students to be outperforming their age-matched scholarship peers. A second comparison was done in order to look for any interactions between time at YBR and a student's financial status. There was no significant interaction between the two variables, however a students' overall score at T1 was a function of how long he or she had attended YBR. The students (regardless of their scholarship status) who attended the school for less time had a significantly lower score than those who had been there for longer. This difference was no longer significant at T2, which indicates that the students who had been there for less time caught up to their peers. This suggests that time spent in the program is a better predictor of a child's performance than his or her financial status. A similar pattern was found for the cognitive and emotional domains. The difference between the cognitive scores approached significance at T1, but was no longer significant at T2. This demonstrates that once the students are given a reasonable amount of time in the program they can learn the cognitive skills and catch up fairly quickly. The fact that the emotional scores were still significantly different at T2 suggests that those skills are a bit more difficult to learn. Whereas cognitive skills are fairly objective and learned at the preschool, emotional skills are more subjective and can be learned at home. If the home environment was not optimal, then the children could have learned to deal with certain situations improperly (using physical aggression, not sharing, etc). These maladaptive skills will have to be extinguished before new, adaptive skills can be taught and this obviously takes time.

There were two other groups that were compared to see if their average scores were different, males and females. Popular culture often suggests that boys are better at sports than girls, while girls are often thought of as smarter and having greater emotional knowledge/understanding. Countess studies have demonstrated that females experience greater empathy and are more likely to outwardly display their emotions (Myers, 2002). When the domain subscores for all of the students were examined, none of these hypotheses were found to be true. At T1, there were no significant differences in the scores, however the female students scored slightly higher than the males in motor tasks, while the males scored higher in the cognitive domain and the emotional domain. Perhaps the females coordination develops faster and the males do not surpass the females in motor skills until elementary or middle school. There were still no significant differences at T2 and although both groups experienced significant increases, there were no significant differences in the amount of the increases. The females experienced a significant increase in the cognitive and motor domains, while the males improved significantly in the cognitive, motor, and emotional domains. All of this data suggests, that males and females perform similarly during the preschool years. This may be due to the fact that gender role socialization does not occur to a large extent during this early period. Preschool students may be too young to understand the idea that boys and girls are different and "should" do different things. This possibility led me to examine the scores for each age group separately to determine if there is a point when differences begin to emerge. The only significant difference between the sexes was found in the pre-kindergarteners for the emotional domain at T1. As would be expected, the female pre-kindergarteners scored significantly higher in the emotional domain than the males. At

first glance, the fact that this was the only place were a significant difference was found is a bit concerning. It may be a result of the fact that this test is not a good measure of emotional skills. If this is found to be the case, then more emotional items should be added. However, the lack of a significant difference might be a reflection of the fact that there is no significant difference in emotional skills in young children. The overall scores included children as young as 6 months and its likely that there is not a significant difference at that point. It may take years of socialization for differences in these skills to develop, which may be why we do not see them until the children reach age 4. This may also be the explanation for the lack of a significant difference in the cognitive and motor scales (although currently there is less research suggesting gender differences in these areas). Another possible explanation is that there were far female subjects ($N = 17$) than male subjects ($N = 29$). The females in this study may have been exceptionally good at motor skills, or the males may have been worse (and the reverse could be true for the cognitive and emotional tasks). The small sample size, especially with regard to female subjects is problematic and may have biased the results or there may not be any observable gender differences in preschool students.

The pre-kindergarten students provided another interesting comparison. As mentioned previously, the students were tested according to their chronological and classroom ages and the classroom ages were used to analyze the data. At T2 there were 7 students in the 3.5-year-old classroom that had turned four. Their data was compared to that of the 4 year-olds to determine if there was a correlation between age and score. We found a strong, positive correlation between age and score on the 4 year-old test, which indicates that the children's scores increase as they age. This indicates the importance of

assessing the children based on their classroom age rather than their chronological age and serves as another indicator that the YBR program is having a significant impact. The 3.5 year-old students have not been exposed to the same classroom material as the pre-kindergarteners and therefore they do not perform as well on a test designed to measure the abilities of a pre-kindergartener. So although the children are the same chronological age they are not performing as well because they have not had the same experiences. They have not yet been given the opportunity to learn the same things (letters, more/less, writing numbers, etc). This provides support for the reasoning behind entering the child's data according to his or her classroom age rather than his or her chronological age. If we used the chronological ages, then the means would have been negatively skewed which would have resulted in underestimates of the students' abilities. This also suggests that the YBR screening measure does what it was designed to do; it evaluates children according to the Yellow Brick Road curriculum.

The development of such a test always involves an interesting question…at what point should we consider a child passing and at what point is a child considered failing? This is a very difficult question to determine and one that could have serious repercussions if the fail point is set too high or too low. If it is set too high, then numerous students could be identified as failing. If students were falsely identified as failing then they could fall victim to a self-fulfilling prophecy and could be treated differently by teachers and teased by their peers. In contrast, if the fail point is set too low then children who are truly having difficulties may not be identified. As mentioned previously, early intervention is key and can significantly improve alter an at-risk child's future (Barnett, 1998, Ramey & Ramey, 1992, Reynolds et al., 2001, Reynolds, 1992).

So if those children are not identified early on and are left to struggle then they may experience learning or emotional problems in the future. With these issues in mind, I feel as though it is too early to determine an equivocal failing point based on average scores. The sample size for this study was small which could skew means in either direction and items (as well as the curriculum) will be altered in the future. It will take many replications before a true average emerges and until that point we will be forced to rely on other means of determining which children may need additional assessment. At this point, the best method for determining a failing point is to examine how the children performed as compared to the other children and in order to do so a percentile graph was created (see figure 19).

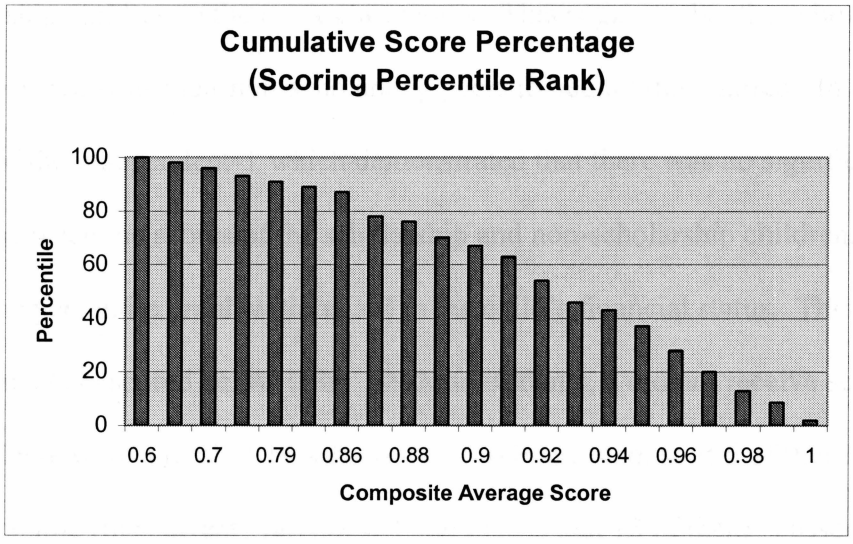

Figure 19. Percentage of Children Falling At Each Composite Average Score

The students' scores were arranged in descending order and each student was ranked according to his or her score. It was determined that 70% of students scored above 0.89. The children who had scores that fell below that point need to be examined closely. At this point there are a few students who fell into that range because of the test design. The

infants (who were well below 12 months of age) were tested according to skills that a 12 month old should be able to perform. Although the children are not delayed, their scores were well below 0.89. In the future, infants should not be tested until they are 12 months. The other students who scored in the low range should be examined to determine if there is a certain domain that can be improved or if the problem is more global. All of the students in this range should be monitored closely and if they do not improve significantly in the coming months, then they should be referred for further assessment.

The results of this study demonstrate that YBR has met the goals set by the United Way. The first was that by 2003 scholarship children had to be prepared to enter kindergarten. There was no significant difference in the scores of the scholarship and non-scholarship children in the pre-k classrooms. This suggests that the scholarship students are as ready as their non-scholarship peers to begin kindergarten. In addition to the results of the independent-T which demonstrated that there was no significant difference between the scores of the scholarship and non-scholarship children, I also examined the percentile graph with regard to the child's financial status. Thirty percent of the students (14) scored below 0.89. Of these students, 8 did not receive scholarships and 6 did. There were a total of 19 scholarship children tested, so if 6 of them fell below the 30th percentile (the current "fail point") that means that 13 of them "passed" (which is 68%). This meets and exceeds the United Way's goal for 2004 (60% of children who receive scholarships and have attended YBR for 6 months have mastered the behavioral outcomes for their age). This is yet another indicator YBR is a successful program in which children who come from low-income families are able to catch up and do as well as their peers.

Many individuals will probably question the rationale behind creating a brand new measure when so many other developmental and psycho-educational ones already exist, especially because it will be difficult to prove that the measure is useful and has high validity and reliability. There were numerous reasons for doing so and we seem to have overcome the reliability and validity issues. It was clear that YBR needed a more formal way to determine how children are progressing through the program and if they are actually learning. It is at this point that one may ask why not just use a well-known measure and the reasons for doing so are just as clear. YBR is like any other pre-school, it is filled to the brim with well-intentioned by constantly overworked teachers and a wide variety of students, many of whom need a great deal of attention. Within this environment there is no time to administer a Bayley or a Brigance and YBR does not have the staff to do so. Those tests can be difficult and time-consuming to score interpret. Additionally, some of the items may seem a bit useless to the teachers and parents.

The YBR screening measure was designed with all of these ideas in mind. It was designed with the specific behavioral objectives of YBR in mind, it was supposed to be short and easy to administer, score and interpret, and was to provide useful information to parents and teachers. Now that the first few rounds of testing are complete it seems as though the YBR screening measure has accomplished it's goals. The test was administered by four different individuals (two of whom were not involved in its creation) and they all found it easy to administer and score. None of the examiners had significant problems with the administration and scoring of the test and the problems with items that were identified were quickly rectified. Items that were time consuming and

provided little additional information were removed and some were altered because they did not seem to be measuring what they were intended to measure. The YBR screening measure was designed to measure items that the majority of children in each age group should be able to complete (rather than asking items that only the smartest children would know). It was designed with the hopes that each and every child who is performing at or above what is expected for his or her age should receive a perfect score (100%). After examining a histogram of the students' scores it appears as though the test did exactly that. Approximately 67% of students scored above 90%. The fact that more of the scores were not 100% was probably a function of day-to-day variability in scores, rather than actual ability. When working with young children, its not surprising that some days they would know the answer to your questions and the very next day they would not. Additionally, some of the teacher's responses may have been similarly affected. One of the items asked teachers to state if the child was able to solve problems without resorting to physical means. If the teacher had just witnessed that child fighting, then the teacher may have answered the question differently then she would have answered it if the child had not been involved in a fight. As for concerns about reliability and validity, they are at least in part unfounded. Interrater reliability was high (0.999) and the YBR screening measure and the Denver Developmental Screening Test both identified two children as needing further assessment. In sum, the YBR screening measure seems to have accomplished all of its goals and is still a reliable and valid test.

The key to the successful administration of this test (and any others that involve young children) is flexibility. Initially, there was a long list of rules about when the test could be administered, where it should be done, how it should be done, what to do if a

child refused, etc but in the end all of them were basically thrown out of the window. The point of the test was to reliably gain important information as quickly and efficiently as possible and in order to do so the rules had to be broken. If children were only tested between the hours of 9:30-11:30 then it would take months and months to complete testing and valuable time in the afternoon would not be utilized. So we began testing in the afternoon and it worked well because the children seemed to be as cooperative and alert as they are in the mornings. Additionally the teachers preferred the afternoon testing because the children did not miss circle time and other important activities/projects. In order to gain the least biased results, the test was designed with very few teacher response questions and was to be administered by Washington and Lee students. Unfortunately it was not always possible to abide by this rule. There were a few children who refused to answer any of the questions for the experimenter, even if the teacher was at the testing location. In these cases the teachers were given the score sheets and asked to administer the items and observe the child's behavior in the classroom, while the experimenter watched. In addition, we had to be flexible with the test items themselves. In order to keep the child entertained, sometimes items had to be administered out of order or repeated. After the test had been administered once, we realized that a few of the items had to be changed. For example, pictures of fruit were used to test the pre-kindergarteners knowledge of more and less. One question had a picture of three bunches of bananas and five strawberries. A number of the children said there were more bananas, because they counted the individual bananas rather than the bunches. So that item was changed and now uses pictures of farm animals.

There are a number of things that could be done in the future to enhance the strength of the YBR screening measure. First, and most importantly, a significant amount of replication is needed. This test should be administered as often as possible and to as many children as possible. This will allow for the determination of a true mean and the further identification of items that need modification. Additionally, by testing more subjects, we will collect more data, which will increase the power of the measure. In order to determine if the students score higher on the test at T2 as a result of taking the test for a second time, a small subset of the students should only be tested at the end of the year. If taking the test has no effect on the students, then both groups (those who received the test twice and those who took it only once) should score the same. It would be helpful if the measure could be used at other schools to see if other children perform equally well, or if a child's performance is affected by whichever program he or she is in. That data would indicate if the YBR screening manual can be used in other settings or if it's too specific (as a result of being based on the curriculum at YBR). It would also be interesting to administer the measure to children who are not currently attending any form of pre-school or day-care to determine if and how their scores differ.

As was mentioned previously, in order to truly determine if the YBR program is ameliorating the effects of poverty, the measure needs to be given to students before they have been in the program for an extended period of time. Many other experimenters should administer the test to determine other possible changes or adaptations that will improve the testing procedures. As this is done, interrater reliability checks should be performed and scoring procedures should be altered if needed.

Although the measure does contain items in each of the four domains (cognitive/language, motor, emotional/social, and adaptive/self-help), it is not very well balanced and it would benefit from the addition of items. Adding a few items (especially to the emotional and adaptive categories) would probably reduce some of the variability in the scoring and would make those two categories more reliable indicators of the child's true abilities. The emotional category is definitely the most variable and most influenced by biases in teacher reports and the child's mood. That category could be improved if we could add actual tasks that tap the child's emotional abilities rather than just teacher reports or self-report items. For example, Goleman (1995) has developed a task that examines the motivation of 4 year-olds. He suggests presenting the child with the following scenario: tell the child that you have two marshmallows (or anything else that is desirable to the child) and tell the child that he/she can have one marshmallow now, but if he/she waits until the end of the test then he/she can have both. One point would be awarded if the child chose to have the marshmallow immediately while two would be awarded if the child decides to wait. Richburg and Fletcher (2003) suggest an interesting task that measures how 3 year-olds handle relationships. While in the presence of another child, the experimenter presents the subject with two brand new toys and comments on the fact that the other child has no new toys, which may make him/her sad. If after this comment the subject does not share his/her new toys then the experimenter should prompt him/her to do so. Award the child one point if he/she does not share at all, two if he/she does so with prompting, and three if the subject shares without prompting.

In sum, the goals of this study have been met. A screening measure that was easy to administer, easy to score, and easy to interpret was created and it provided useful

information to the parents and teachers of Yellow Brick Road. The students' scores are increasing over time, which indicates that they are learning the skills that are being presented to them. The lack of a significant difference between the scores of the scholarship and non-scholarship students and the fact that over 60% of the non-scholarship students have mastered the behavioral outcomes for their age indicates that YBR is doing an admirable job of preparing low-income students to enter kindergarten and has met the goals set by the United Way. In addition to identifying students who may need further screening, the measure has identified certain skills that need improvement in all of the students (such as printing numbers). The curriculum for the coming academic year can be adjusted to provide additional instruction in these areas which will result in further improvement and a stronger program.

References

Alpern, G., Boll, T, & Shearer, M. (1980). *Developmental Profile II.* Los Angeles, California: Western Psychological Services.

Barnett, W. (1998). Long-term cognitive and academic effects of early childhood education on children in poverty. *Preventive Medicine, 27,* 204-207

Bayley, N. (1969). *Bayley Scales of Infant Development.*(2nd ed.) New York: Psychological Corporation

Berk, L. (2001). *Development Through the Lifespan.* (2nd ed.). Boston: Allyn and Bacon.

Berger, S. (1991). *The Developing Person Through Childhood and Adolescence.* (3rd ed.). New York, New York: Worth Publishers.

Bracken, B. (Ed.). (2000). *The Psychoeducational Assessment of Preschool Children.* Boston: Allyn and Bacon.

Brigance, A. (1985). *Brigance Preschool Screen.* North Billerica, Massachusetts: Curriculum Associates Inc.

Denham, S. (1998). *Emotional Development in Young Children.* New York: The Guilford Press.

Frankenburg & Dodds. (1990). *Denver Developmental Inventory.* Denver, Colorado: Denver Developmental Materials.

Goleman, D. (1995). *Emotional Intelligence: Why It Can Matter More Than IQ.* New York: Bantam Books.

US Department of Health and Human Sevices, Adminstration for Children and Famlies. (n.d.) *Head Start.* Retrieved May 12, 2004, from http://www2.acf.dhhs.gov/programs/hsb/about/index.htm.

Lewis, M, & Brooks-Gunn, J. (1979). *Social cognition and the acquisition of self.* New York: Plenum Press. Bibliography: p. 273-288.

Linder, T. (1990). *Transdisciplinary Play-Based Assessment: A Functional Approach to Working with Young Children.* Baltimore: Paul H. Brookes Publishing Company.

Marazon System. Available: http://www.marazon.com

Myers, D. G. (2002). *Social Psychology.* 7th ed. Boston: McGraw Hill Publishing Company.

Mindes, G., Ireton, H., & Mardell-Czudnowski, C. (1996). *Assessing Young Children.* Albany: Delmar Publishers.

Newborg, J. Stook, R., & Wnek, L. (1984). *Battelle Developmental Inventory.* Chicago, Illinois: Riverside Publishing Company.

Nuttall, E, Romero, I., Kalesnik, J. (Eds.). (1999). *Assessing and Screening Preschoolers: Psychological and Educational Dimensions.* Boston: Allyn and Bacon

Parks, S. (1992). *Hawaii Early Learning Profile.* Palo Alto, California: VORT Corporation.

PRO-ED Inc. (1998). Developmental Assessment of Young Children: Adaptive Behavior Subtest, Cognitive Subtest, Physical Development Subtest, Social-Emotional Subtest. Austin, Texas: PRO-ED Inc.

Ramey, C. & Ramey, S. (1992). Effective early intervention. *Mental Retardation, 30,* 337-345.

Reynolds, A., Temple, J., Robertson, D., & Mann, E. (2001). Long-term effects of an early childhood intervention on educational achievement and juvenile arrest. *Journal of the American Medical Association, 285,* 2339-2346.

Richburg, M. & Fletcher, T. (2002). Emotional intelligence: Directing a child's emotional education. *Child Study Journal, 32*, 31-38.

Ronald McDonald Children's Hospital – Developmental Milestones. Available: http://www.lumc.edu/rmch/child/mileston.htm

Appendix A: Yellow Brick Road Screening Measure and Score Sheets
Yellow Brick Road Screening Measure

Directions:
1. Read over all of the test items for the age group that you are going to test prior to administering it.
2. Make sure that you have all of the test items that you need before you pick up the child and that you know which items will be observed, which ones you will ask the teacher about, and which ones will be administered.
3. Administer all of the items in the order they are listed, unless otherwise stated in the manual.
4. Unless otherwise stated in the manual, make sure you mark the score sheet for the child for each item before moving on to the next item. You do not need to add up all the points as you go along. That can be done after you have finished screening the child.
5. For the items that have to be observed at mealtimes, you can observe all of the children in the class that need to be screened. Just make sure you fill out each child's score sheet.
6. For the items that you need to speak with the teacher about, you can ask the teachers about all of the children at once. Just make sure that you mark the answers on each child's score sheet.
7. Once you have finished administering the test, add up all of the points in each of the domains and a total score. Compare the child's scores to the expected scores for a child of that age. Alert the director if the child scores below normal in any of the domains or in the overall score.

6 wks – 12 months All of these can be done in the child's classroom in order to minimize distress.

1. E/S -Shows signs of basic emotions
Put the child in an emotion provoking situations to see how they respond. Watch the child's initial reaction to you (fear). Give a child a treat (happiness). Take away a toy (anger). Hide a toy or play peek-a-boo (surprise). If the child is not reacting well to your presence then stand back and observe the child's reactions to interactions with his or her teacher and/or classmates. On the score sheet, circle the names of the emotions demonstrated by the child. Then circle the number of emotions that the child shows (circle 0 if the child does not show any). The number of points given is the number that you circled.

Expected Score = 4
Average Score in 2004 = 4, Standard Deviation (SD) = 0

2. E/S -Matches adults emotional expressions during face-to face-interaction
Pick up the child and make faces and observe the child's reaction. Circle 1 if the child rarely matches your expression. Circle 2 if the child matches your expression sometimes. Circle 3 if the child matches your expression most of the time. If the child is reluctant to go to you, you may ask the teacher to administer this item. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 2.5, SD = 0.71

3. E/S -Social referencing
Put cheerios on high chair and see if child looks to teacher before eating. Circle 1 if the child rarely looks to the teacher. Circle 2 if the child looks to the teacher sometimes. Circle 3 if the child looks to the teacher most of the time.

Expected Score = 3
Average Score in 2004 = 2.5, SD = 0.71

4. M -Pincer grasp
Give child cheerio and observe his/her grasp. Circle yes if the child uses a pincer grasp (actually pinching the cheerio) and no if the child does not. Give the child one point for a no and two points for a yes.

Expected Score = 2
Average Score in 2004 = 2, SD = 0

5. C/L -Finds objects hidden in 1 place
Hide a ball under a box and ask the child to find it. Circle 1 if the child doesn't even make an attempt to find it. Circle 2 if the child attempts to find it but does not actually complete the task. Circle 3 if the child finds the ball. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0

6. M -3-5 independent steps
Ask child to walk to you. Circle 1 if the child falls immediately upon standing. Circle 2 if the child takes one to two steps and then falls. Circle 3 if the child takes three to four steps and then falls. Circle 4 if the child takes more than five steps before falling. The number of points given is the number that you circled.

Expected Score = 4
Average Score in 2004 = 1, SD = 0

7. M -Play patty-cake
Play patty-cake with the child. Circle yes if the child will play the game with you and circle no if the child cannot. If the child is reluctant to play with you then ask the teacher to administer this item. Give the child one point for a no and two points for a yes.

Expected Score = 2
Average Score in 2004 = 2, SD = 0

The following items can be observed in the child's classroom:
8. C/L -Understands no/stop/all gone/more
Observe the child to see if he/she understands no/stop/all gone/more. On the score sheet circle the names of the term that he/she understands. Add up the number of terms that the child understands and circle that number. The number of points given is the number that you circled.

Expected Score = 4
Average Score in 2004 = 0.5, SD = 1.41

9. C/L -Preverbal gestures to communicate
Observe the child to see if he/she uses preverbal gestures (for example pointing or reaching for an object that they want) to communicate. Circle yes if the child does so and circle no if the child does not. If the child uses verbal gestures to communicate circle yes. Give the child one point for a no and two points for a yes.

Expected Score = 2
Average Score in 2004 = 2, SD = 0

10. M -Sits alone
Observe the child to see if he/she can sit up alone. Circle 1 if the child can't sit alone. Circle 2 if the child can sit alone briefly. Circle 3 if the child can sit alone for an extended period of time. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0

11. M -Pulls to stand
Observe the child to see if he/she can pull to a stand. Circle 1 if the child doesn't make any attempts to do so. Circle 2 if the child is beginning to do so (puts hands on object). Circle 3 if the child is able to pull him/herself up but immediately falls. Circle 4 if the child is able to pull up and remain standing. The number of points given is the number that you circled.

Expected Score = 4
Average Score in 2004 = 3, SD = 1.41

12. A/S -Lift cup to mouth and drink
Observe the child at mealtime to see if he/she is able to lift a cup to his/her mouth and drink. Circle 1 if the child can't. Circle 2 if the child does so but awkwardly. Circle 3 if the child does so comfortably. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0

Total Expected Score = 37 (Cognitive = 9, Motor = 15, Emotional = 10, Adaptive = 3)
Average Score in 2004 = 28.5, SD = 0.71 (Cognitive = 5.5, SD = 0.71:
Motor = 11, SD = 1.41: Emotional = 9, SD = 1.42: Adaptive = 3, SD = 0)

12-18 months

13. E/S -Recognizes self in mirror
Place the child in front of a full body mirror and then put a bit of rouge or lipstick on the child's nose (using a tissue) and then show him/her a full body mirror again. Circle 1 if the child touches the mirror. Circle 2 if the child touches the mirror then his/her body. Circle 3 if the child touches his/her body. Circle 4 if the child touches his or her nose. The number of points given is the number that you circled.

Expected Score = 4
Average Score in 2004 = 2, SD = 1.73

14. C/L -Follow simple directions/commands (ex: come here, don't do)
Ask the child to stack blocks. For this item you are only scoring the child's ability to follow directions, not his/her ability to stack blocks. Don't score this item until the end of the test, so you have a better idea of how often the child follows directions. Circle 1 if the child does so rarely. Circle 2 if the child does so sometimes. Circle 3 if the child does so most of the time. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0

15. M -Stack 2 or more blocks
Now you will score the child's ability to stack the blocks. Count the number of blocks in the tower before it falls. Circle 0 if the child doesn't stack any blocks. Circle 1 if the child stacks one block. Circle 2 if the student stacks two or more blocks. The number of points given is the number that you circled.

Expected Score = 2
Average Score in 2004 = 2, SD = 0

The following items need to be observed at mealtime or snack time:

16. M – Manipulates small objects with improved coordination (cheerios)
Give the child cheerios and se if he/she manipulates them with coordination (can get the cheerios into their mouths without dropping them). Circle yes or no. Give the child one point for a no and two points for a yes.

Expected Score = 2
Average Score in 2004 = 1.67, SD = 0.58

17. A/S – Feed self with spoon
Observe the child at mealtime to see if he/she is able to use a spoon. Circle 1 if the child can't. Circle 2 if the child does so but awkwardly. Circle 3 if the child does so comfortably. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0

You will have to ask the teacher the following question:
18. E/S -Signs of empathy
Ask the teacher about the child's reaction when another classmate is injured or upset. Ask if the child shows any signs of empathy (trying to comfort the injured student or becoming upset themselves). Give the child one point for a no and two points for a yes.

Expected Score = 2
Average Score in 2004 = 1.67, SD = 0.58

Total Expected Score = 16 (Cognitive = 3, Motor = 4, Emotional = 6, Adaptive = 3)
Average Score in 2004 = 13.34, SD = 2.28 (Cognitive = 3, SD = 0:
Motor = 3.67, SD = 0.58: Emotional = 3.67, SD = 2.08: Adaptive = 3, SD = 0)

18 – 24 months

19. E/S –May say hi/bye/thank you if prompted
Throughout the course of the administration prompt the child to use hi/bye/thank you when appropriate. Circle 1 if the child rarely does so. Circle 2 if the child does so sometimes. Circle 3 if the child does so most of the time. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0

20. M – Sits directly in small chair
Ask the child to sit down (in a chair that is their size) at the beginning of the screening. Observe whether the child sits directly on the chair (with their bottom on the chair and their feet touching the floor). Circle yes or no. Give the child one point for a no and two points for a yes.

Expected Score = 2
Average Score in 2004 = 2, SD = 0

21. E/S – Displays self-conscious emotions
Take out the puzzle with the rose and flashlight and orange on it and ask the child to put it together. Observe the child's reaction upon finding the correct places for the pieces to see if the child shows pride (if he/she is able to complete the task) or shame (if he/she cannot complete the task). You should continue to observe the child throughout the administration to watch for these emotions. Circle 1 if the child rarely shows these emotions. Circle 2 if the child shows the emotions sometimes. Circle 3 if the child shows the emotions most of the time. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 2.17, SD = 1.17

22. E/S – Has vocabulary of emotional terms (happy, sad, angry)
Ask the child to point to the happy/sad/angry face. On the score sheet, circle the names of the emotions (happy, sad, angry) that the child correctly identifies. Circle 0 if the child does not correctly answer any of the questions. Add up the names of the emotions that the child correctly identifies in both conditions and circle that number. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 2.5, SD = 0.84

23. C/L –Says name of familiar toys and objects
Point to objects in the room (chair, table, blocks, shoes, etc) and "ask what is this?" Circle the total number of correct answers that the child gives (circle 0 if the child does not answer any of your questions correctly). The number of points given is the number that you circled.

Expected Score = 4
Average Score in 2004 = 4, SD = 0

24. C/L –Echos single words they hear spoken
Ask the child to "say what I say" and say five words (name objects in the room, animals, etc). Circle yes if the child is able to repeat after you and no if the child cannot. Give the child 1 point for a no and 2 points for a yes.

Expected Score = 2
Average Score in 2004 = 2, SD = 0

25. C/L –Points to pictures upon request
Take out the laminated sheet of pictures. Ask child to point to a picture. Repeat this three more times for a total of four questions. Circle the number of correct answers that the child gives (circle 0 if the child does not answer any of your questions correctly). The number of points given is the number that you circled.

Expected Score = 4
Average Score in 2004 = 4, SD = 0

26. C/L -Follow one step directions (put x here)
Ask the child to jump in place. For this item you are only scoring the child's ability to follow your directions, not his or her ability to jump in place. Do not score this item until the end of the administration so you have a better idea about how often the child follows directions. Circle 1 if the child does so rarely. Circle 2 if the child does so sometimes. Circle 3 if the child does so most of the time. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0

27. M –Jumps in place
Now score whether or not the child is able to jump in one place. Circle yes if the child is able to jump in place and no if the child cannot. Give the child 1 point for a no and 2 points for a yes.

Expected Score = 2
Average Score in 2004 = 2, SD = 0

28. M –Runs across length of room without falling
Tell the child you want to see how fast they can run. Ask them to run across the length of the room. Circle yes if the child is able to run the length of the room without falling and no if the child cannot. Give the child 1 point for a no and 2 points for a yes.

Expected Score = 2
Average Score in 2004 = 2, SD = 0

29. M –Can stand on 1 foot momentarily
Ask the child to stand on one foot. Circle yes if the child is able to stand on one foot momentarily and no if the child cannot. Give the child 1 point for a no and 2 points for a yes.

Expected Score = 2
Average Score in 2004 = 1.83, SD = 0.41

30. M –Builds tower of 4-6 blocks
Take out the blocks and ask the child to build you a tall tower of blocks. Count the number of blocks in the tower right before it falls. Circle 0 if the child does not stack any blocks. Circle 1 if the child stacks at least 2 blocks. Circle 2 if the child stacks three blocks. Circle 3 if the child stacks four or five blocks. Circle 4 if the child stacks six or more blocks. The number of points given is the number that you circled.

Expected Score = 4
Average Score in 2004 = 3.83, SD = 0.41

31. A/S –Zips and unzips large zipper
Take out the pants with the zipper on them or use the child's coat. Ask the child to zipper the zipper (once you've started the zipper). Circle 1 if the child can't zipper the zipper. Circle 2 if the child can do it with your assistance. Circle 3 if the child can do so without any assistance (other than starting the zipper). The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0

The following questions will have to be observed at snack or mealtimes or you will have to ask the teacher.

33. A/S -Use fork and spoon
Observe the child at mealtime to see if he/she is able to use a fork and spoon. Circle 1 if the child can't. Circle 2 if the child does so but awkwardly. Circle 3 if the child does so comfortably. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0

34. A/S -Drink from a cup without handles
Observe the child at mealtime to see if he/she is able to drink from a cup without handles. Circle 1 if the child can't drink from a cup without handles. Circle 2 if the child does so awkwardly (i.e. he/she spills frequently). Circle 3 if the child is able to drink form a regular cup comfortably (with few spills). The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0

You will have to ask the teachers the following questions

35. C/L -Uses 3-5 word phrases
Ask the teacher if the child uses 3-5 word phases. If you heard the child do so, then you may score this item. Circle yes or no. Give the child one point for a no and two points for a yes.

Expected Score = 2
Average Score in 2004 = 1.83, SD = 0.41

36. A/S –Removes clothes without help
Ask the teacher if the child is able to take off sweater/jacket/etc. Circle one if the child can't. Circle 2 if the child is able to do so with assistance. Circle 3 if the child is able to do so without assistance. You may show the teacher the options and ask him/her to choose which one fits the child best. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0

37. M –Can appropriately use playground slide
Ask the teacher if the child uses the playground slide appropriately. Circle yes or no. Give the child one point for a no and two points for a yes.

Expected Score = 2
Average Score in 2004 = 2, SD = 0

38. C/L -Uses pronouns
Ask the teacher if the child is able to use pronouns. An example would be the child saying "he did it." Circle yes or no. Give the child one point for a no and two points for a yes.

Expected Score = 2
Average Score in 2004 = 1.83, SD = 0.41

Total Expected Score = 51 (Cognitive = 17, Motor = 13, Emotional = 9, Adaptive = 12)
Average Score in 2004 = 50.01, SD = 2.28 (Cognitive = 16.67, SD = 0.82:
Motor = 13.67, SD = 0.52: Emotional = 7.67, SD = 0.21: Adaptive = 12, SD = 0)

2 years

Before you bring the child into the room, place the blocks at a different table than the one that you will sit at during testing. You will also need to place a few toys around the area to be picked up later. Additionally you need to take the child's coat and three others to the testing area.

39. C/L -Follow 2 part directions
Tell the child that you put the blocks on the wrong table. Ask the child to go pick up the blocks and bring them back to your table. If you forget to set the blocks on a different table then give 2 part directions at another point during the screening. Circle yes if the child is able to do so and no if the child is unable to do so. Give the child one point for a no and two points for a yes.

Expected Score = 2
Average Score in 2004 = 2, SD = 0

40. M -Builds tower of 6-8 cubes
Ask the child to build the tallest tower they can. Count the number of blocks in the tower right before it falls. Circle 0 if the child does not stack any blocks. Circle 1 if the child stacks two or three cubes. Circle 2 if the child stacks four or five cubes. Circle 3 if the child stacks six or seven cubes. Circle 4 if the child stacks eight or more cubes. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 3.6, SD = 0.55

41. C/L -Counts orally to 3
Ask the child to count to three. Circle 1 if the child does not count at all. Circle 2 if the child can say one. Circle 3 if the child can say one, two. Circle 4 if the child can say one, two, three. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 2.6, SD = 0.89

42. C/L -Combine 2 words (noun verb combo)

Throughout the course of the administration, observe the child's language usage. Circle 1 if the child only uses one-word utterances. Circle 2 if the child combines nouns and verbs into two-word utterances. Circle 3 if the child uses three or more words. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0

Tell the child that now you are going to play Simon Says. You may add additional items in between the test items (touch the floor, touch your nose, etc)

43. M -Stands on 1 foot
Tell the child "Simon says stand on one foot." Count to yourself while the child does so. Circle 1 if the child can't. Circle 2 if the child does so briefly (less than four seconds). Circle 3 if the child can do so for more than 4 seconds. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 2.6, SD = 0.89

44. M -Jumps forward 4 inches
Tell the child "Simon says jump forward." Circle yes if the child jumps forward more than four inches and no if the child does not. Give the child one point for a no and two points for a yes.

Expected Score = 2
Average Score in 2004 = 1.8, SD = 0.45

45. M -Walks forward and backwards on line
Tell the child "Simon says walk forwards" and "Simon says walk backwards." On the score sheet circle which ones the child is able to do. In addition, circle 0 if the child can do neither. Circle 1 if the child can do one of the two. Circle 2 if the child can do both. The number of points given is the number that you circled.

Expected Score = 2
Average Score in 2004 = 2, SD = 0

46. M -Walks on tiptoe
Tell the child that "Simon says walk on your tiptoes." You may demonstrate this as you are saying it. Circle 1 if the child can't complete the task. Circle 2 if the child is able to do so briefly (less than 4 steps). Circle 3 if the child is able to do so for an extended period of time (greater than 4 steps). The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 1.6, SD = 0.89

47. A/S -Put toys away
Ask child to help you put away the blocks and the other toys around the testing area. Circle 0 if the child will not pick up the toys. Circle 1if the child will do so with you. Circle 2 if the child will do so with constant reinforcement from you. Circle 3 if the child does so independently. After the administration, talk with the teacher about the child's performance on this item to determine if it is typical. If the teacher's opinion is different from what you observed, then use the teacher's opinion. The number of points given is the number that you circled.

Expected Score = 2
Average Score in 2004 = 2.4, SD = 0.55

48. A/S -Find/ID own belongings
Hold up the coats that you brought with you (including the child's). Ask the child to pick out his/her coat from the ones that you are holding up. This item can also be completed when you return the child to the classroom. Circle yes if the child correctly identifies his/her coat and no if he/she does not. Give the child one point for a no and two points for a yes.

Expected Score = 2
Average Score in 2004 = 2, SD = 0

49. E/S-Names his or her own sex
Ask the child "are you a boy or girl?" Then show the child the picture of the kid that is the same sex as the child and ask "is this a boy or girl?" Then show the child a picture of a kid of the opposite sex and ask "is this a boy or a girl?" Circle 0 if the child doesn't answer any questions correctly. Circle 1 if the child answers one question correctly. Circle 2 if the child answers two questions correctly. Circle 3 if the child answers three questions correctly. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0

50. E/S-Knows Age
Ask the child "how old are you?" The child may answer with words or by holding up fingers. Circle yes if the child answers correctly and no if the child does not. Give the child one point for a no and two points for a yes.

Expected Score = 2
Average Score in 2004 = 1.8, SD = 0.45

51. E/S-Says please and thank you
Observe the child's manners throughout the course of testing to see if the child says please and thank you. If you don't have an opportunity to accurately score this item you can ask the teacher. Circle 1 if the child never says please and thank you. Circle 2 if the child will do so with prompting. Circle 3 if the child will do so spontaneously. The number of points given is the number that you circled.

Expected Score = 2
Average Score in 2004 = 2.8, SD = 0.45

For the following item you will have to observe the child at mealtime or ask the teacher:

52. A/S-Eat with fork and spoon
Observe the child to see if he/she eats with a fork and spoon. Circle 1 if the child can't hold the fork and spoon. Circle 2 if the child can hold the fork and spoon but doesn't use them. Circle 3 if the child uses his/her utensils sometimes. Circle 4 if the child uses them all of the time. The number of points given is the number that you circled.

Expected Score = 4
Average Score in 2004 = 3.4, SD = 0.55

You will have to ask the teacher the following questions:

53. A/S -Begin potty training
Ask the teacher if the child has begun potty training. Explain that if the teacher asks the child if they need to go potty the child will try then the answer is yes. If the child will not attempt to use the potty at all then the answer is no. Circle yes or no on the scoring sheet. Give the child one point for a no and two points for a yes.

Expected Score = 2
Average Score in 2004 = 1.2, SD = 0.45

54. E/S-Engages in role-playing
Ask the teacher if the child engages in role-playing (cooking in the kitchen, playing with the tools, dressing up etc.). Circle yes or no on the scoring sheet. Give the child one point for a no and two points for a yes.

Expected Score = 2
Average Score in 2004 = 1.8, SD = 0.45

55. E/S-Greets familiar adults spontaneously
Ask the teacher if the child will greet familiar adults spontaneously. The greeting can be verbal or it can be a wave. Circle 1 if the child never greets familiar adults. Circle 2 if the child will greet a familiar adult with prompting. Circle 3 if the child will do so spontaneously. The number of points given is the number that you circled.

Expected Score = 2
Average Score in 2004 = 2.8, SD = 0.45

Total Expected Score = 44 (Cognitive = 9, Motor = 13, Emotional = 12, Adaptive = 10)
Average Score in 2004 = 40.4, SD = 4.77 (Cognitive = 7.6, SD = 0.89:
Motor = 11.6, SD = 2.07: Emotional = 12.2, SD = 1.79: Adaptive = 9, SD = 0.71)

2.5 years

56. C/L -Begin to use shapes
Take out the laminated sheet with the shapes on it. Ask child to point to certain shape or what shape is this for at least circle, square, and triangle. You may ask about the additional shapes if the child knows circle, square, and triangle. On the score sheet, circle the names of the shapes that the child correctly identified. Add up the number of correct answers. Give the child one point for each shape correctly identified, with the maximum number of points being 5 and circle that number. Circle 0 if the child cannot identify any of the shapes.

Expected Score = 3
Average Score in 2004 = 5, SD = 0

57. C/L -Begins to use colors
Take out the laminated sheet with the colors on it. Ask child to show you a color or what color is this for at least red, blue, and yellow. You may ask about the additional colors if the child knows red, blue, and yellow. On the score sheet, circle the names of the colors that the child correctly identified. Add up the number of correct answers. Give the child one point for each color correctly identified, with the maximum number of points being 5 and circle that number. Circle 0 if the child cannot identify any of the colors.

Expected Score = 3
Average Score in 2004 = 5, SD = 0

58. M -Use scissors
Tell the child that now you are going to work on an art project. Take out the piece of paper with the line on it. Give the child the scissors and ask him/her to cut the piece of paper on the line. Circle 1 if the child can't hold the scissors. Circle 2 if the child holds scissors correctly with one hand. Circle 3 if the child holds the scissors correctly and holds paper with other hand. Circle 4 if the child cuts the paper. Circle 5 if the child cuts on the line. The number of points given is the number you circled.

Expected Score = 2
Average Score in 2004 = 4, SD = 0

59. M -Use glue stick
Take out a piece of construction paper and the cut out of the dog (or any other small piece of paper). Give the child the glue stick and ask child to glue the dog onto the construction paper. Circle 1 if the object is not glued on at all. Circle 2 if the object is somewhat glued on. Circle 3 if the object is glued on. The number of points given is the number that is circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0

60. A/S -Wash hands independently
Tell the child that their hands look a little sticky and that he/she should go wash them. Follow the child to the bathroom and give the child a moment or two to begin on their own. If he/she does not offer assistance, but allow the child to do whatever part of it they can on their own. Circle 1 if the child cannot complete the task without assistance. Circle 2 if the child completes the task with a little bit of assistance. Circle 3 if the child does so without any assistance. The number of points given in the number that you circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0

61. C/L -Names pictures
Take out the laminated sheet with the pictures on it. Ask child, "can you tell me what this is?" for 4 of the pictures. Circle 0 if the child does not correctly identify any of the pictures. Circle 1 if the child correctly identifies 1 picture. Circle 2 if the child correctly identifies two pictures. Circle 3 if the child correctly identifies 3 pictures. Circle 4 if the child correctly identifies 4 pictures. The number of points given is the number circled.

Expected Score = 4
Average Score in 2004 = 4, SD = 0

Take the ball and take the child outside

62. M -Catches a large ball thrown from 5 feet using hands/arms
Tell the child that you are going to play catch. You are only going to score the child's ability to catch, not his/her ability to throw. Throw the ball to the child three times and score the child on their best attempt (the highest skill level achieved). Circle 1 if the child couldn't catch the ball. Circle 2 if the child caught the ball but slipped it slipped through his/her hands. Circle 3 if the child caught the ball and was able to hold on.

Expected Score = 3
Average Score in 2004 = 2.83, SD = 0.41

63. M -Swings leg to kick ball
Tell the child that now you want to play soccer. Roll the ball to the child and observe whether he/she swings his/her leg to kick the ball. Give the child three attempts and score his/her best attempt. Circle yes if the child does so and no if the child does not. Give one point for a no and two points for a yes.

Expected Score = 2
Average Score in 2004 = 2, SD = 0

You will have to ask the teachers the following question:

64. E/S –Follows playground/classroom rules
Ask the teacher if the child follows playground/classroom rules (not directions). For example, does the child use the playground equipment appropriately? Circle 1 if the teacher says rarely. Circle 2 if the teacher says sometimes. Circle 3 if the teacher says the child follows the rules the majority of the time. You may show the teacher the options and ask him/her to choose which one fits the child's behavior best. The number of points given is the number that you circled.

Expected Score = 2
Average Score in 2004 = 2, SD = 1.10

Total Expected Score = 25 (Cognitive = 10, Motor = 10, Emotional = 2, Adaptive = 3)
Average Score in 2004 = 30.83, SD = 1.33 (Cognitive = 14, SD = 0:
Motor = 11.83, SD = 0.41: Emotional = 2, SD = 1.10, Adaptive = 3, SD = 0)

3 years

Do the first three items before leaving the classroom!

65. E/S -Responds to verbal greetings
Greet the child when you first meet him/her. Circle 1 if the child does not respond. Circle 2 if the child does respond. The number of points given is the number that you circled.

Expected Score = 2
Average Score in 2004 = 2, SD = 0

66. E/S -Names a friend
If you do not know the names of other children in the classroom then you need to do this item while standing nearby the teacher so that he/she can tell you if the child is correct. Point to three of the child's classmates and ask the child "who is that". For you to circle yes the child must correctly identify two of the children. If the child cannot do so, circle no. Give the child one point if the child gets a "no" and two points if the child gets a "yes."

Expected Score = 2
Average Score in 2004 = 2, SD = 0

67. E/S -Responds to simple questions (wh- questions)
Point to a couple of classroom objects and ask the child "what is this". Ask the child "where is your cubby". You may also consider their ability to complete the previous item. Circle 1 if the child never answers wh- questions. Circle 2 if they do sometimes. Circle 3 if they do so frequently. If the child seems shy at the outset, you may repeat the questions and wait until the end of the administration to score this item. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0

You may now take the child to the testing location

68. M -Holds crayon using 3-finger grasp
Give the child a crayon and a piece of paper and ask them to draw you a picture. Observe the way the child holds the crayon. Circle 1 if the child does not use a three-finger grasp. Circle 2 if the child does so awkwardly. Circle 3 if the child uses the grasp comfortably. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 2.67, SD = 0.58

69. C/L -IDs/counts quantities of 1, 2, 3, 4
Take out the laminated sheet of paper with groups of objects on it. Ask the child how many is this. Circle 0 if the child does not answer any of them correctly. Circle 1 if the child correctly identifies the group with one item. Circle 2 if the child correctly identifies the group with two items. Circle 3 if the child correctly identifies the group with three items. Circle 4 if the child correctly identifies the group with four items. The number of points given is the number that you circled.

Expected Score = 4
Average Score in 2004 = 3.67, SD = 0.58

70. C/L -Locates big and little objects in groups of 2
Take out the laminated sheet with groups of big and little objects. Show the child one group and ask which is bigger. Show the child the second group and ask which is the little one. Circle 0 if the child doesn't answer either question correctly. Circle 1 if the child answers one question correctly. Circle 2 if the child answers two questions correctly. The number of points given is the number that you circled. You also need to circle which of the two the child is able to answer correctly (big or little).

Expected Score = 2
Average Score in 2004 = 2, SD = 0

71. C/L -ID sounds heard in environment
Ask the child "what sound does a dog make?"
Ask the child "what sound does a cow make?"
Ask the child "what sound does a fire truck make?"
Ask the child "what sound does a drum make?"
Ask the child "what sound does a horn make?"
You may substitute other common sounds (cat, duck, etc).
On the score sheet, circle which sounds the child is able to make. Add up the total number of correct sounds and circle that number. The number of points given is the number that you circled.

Expected Score = 5
Average Score in 2004 = 5, SD = 0

72. M -Makes bridge with 3 blocks
Take out the blocks and ask the child to make a bride. (Place two blocks about an inch apart and put one block on top). You may demonstrate the task, but you need to knock down your bridge before the child starts. Circle 1 if the child cannot do it. Circle 2 if the child gets two blocks. Circle 3 if the child completes the task. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0

73. M -Jumps over rope
Take out the rope and lay it on the floor. Tell the child to pretend it's a river and to jump (forward) over it. Circle yes if the child is able to complete the task and no if the child cannot. Give the child one point if the child gets a "no" and two points if the child gets a "yes."

Expected Score = 2
Average Score in 2004 = 2, SD = 0

74. M -Fastens and unfastens large buttons
Give the child the jacket with the large buttons on it and ask the child to fasten/unfasten them. Give the child 30 seconds or so to do it on his/her own and then offer assistance. Circle 1 if the child does not fasten/unfasten the buttons. Circle 2 if the child does with assistance. Circle 3 if the child does so alone. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0

75. A/S -Pulls off shoes completely; undoing laces/buckles etc.
Ask the child to take off their shoes, if the child looks like he/she is just going to slip them off, ask them to untie/unbuckle them. Go ahead and also ask the child to take off his/her socks. Give the child 30 seconds or so to do it on his/her own and then offer assistance. Circle 1 if the child does not take off his or her shoes. Circle 2 if the child can do so with assistance. Circle 3 if the child can do so alone. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0

76. A/S -Puts on socks and shoes completely (but not tie)
Ask child to put shoes back on and tell the child that they don't have to tie it if he/she doesn't know how. For this item you are only scoring the child's ability to put his/her shoes and socks one, not his/her ability to tie the shoes. Give the child 30 seconds or so to do it on his/her own and then offer assistance. Circle 1 if the child does put on his/her socks or shoes. Circle 2 if the child can do so with assistance. Circle 3 if the child can put on his/her socks alone but requires assistance for the shoes. Circle 4 if the child can put shoes and socks on alone. The number of points given is the number that you circled.

Expected Score = 4
Average Score in 2004 = 2.67, SD = 1.53

You will have to ask the teachers the following questions:

77. C/L -Be able to combine sentences with and/or/but
Ask the teacher if the child is able to combine sentences with and/or/but. You may also assess for this during the testing period. If you have heard the child do so, then you may score the item, otherwise ask the teacher. Circle which of the three words the child uses. Then add up the number of words the child can use and circle that number. The number of points given is the number you circled.

Expected Score =3
Average Score in 2004 = 3, SD = 0

78. C/L -Be able to express needs verbally
Ask the teacher if the child is able to express his/her needs verbally. The child must be able to say what he/she wants, rather than pointing, grabbing, crying etc. You may score this item if you have seen the child do so during the testing period, otherwise ask the teacher. Circle yes or no. Give the child one point for a no and two points for a yes.

Expected Score = 2
Average Score in 2004 = 1.67, SD = 0.58

79. E/S –Exchanges items for play
Ask the teacher if the child will exchange items for play. This means that the child will have one toy and will give it to a playmate (who has a second toy) and the playmate will give the child the second toy (basically, will the child trade toys back and forth). Circle 1 if the teacher says the child will not do so. Circle 2 if the teacher says the child will do so if the teacher tells him/her to. Circle 3 if the teacher says the child will do so spontaneously. You may show the teacher the choices and ask them to choose which one best fits the child. The number of points given is the number you circled.

Expected Score = 2
Average Score in 2004 = 2.67, SD = 0.58

80. E/S -Interacts in a group play situation
Ask the teacher if the child is able to interact in a group play situation. Circle yes or no. Give the child one point for no and two points for yes.

Expected Score = 2
Average Score in 2004 = 2, SD = 0

81. A/S -Able to sit and listen to a story
Ask the teacher if the child is able to sit and listen to a story during circle time. Circle 1 if the teacher says the child does so rarely. Circle 2 if the teacher says the child can do so sometimes. Circle 3 if the teacher says the child will do so most of the time. You may show the teacher the choices and ask them to choose which one best fits the child. The number of points given is the number you circled.

Expected Score = 3
Average Score in 2004 = 2.67, SD = 0.58

82. A/S –Must be potty trained
Ask the teacher if the child is potty trained. Explain that for the answer to be "yes" the child must have less than 2 accidents per week. If the child has more than 2 accidents a week, then you must circle no. Circle yes or no depending on the teachers answer. Give the child one point for no and two points for a yes.

Expected Score = 2
Average Score in 2004 = 1.33, SD = 0.58

Total Expected Score = 50 (Cognitive = 16, Motor = 11, Emotional = 11, Adaptive = 12)
Average Score in 2004 = 47.34, SD = 3.51 (Cognitive = 15.33, SD = 1.15: Motor = 10.67, SD = 0.58: Emotional = 11.67, SD = 0.58: Adaptive = 9.67, SD = 2.08)

3.5 years

83. E/S -Verbally participate in a give and take conversation
While you're taking the child to the testing location, attempt to engage child in conversation. Ask about what they were doing in the classroom/whatever holiday may be nearby/the weather/what movies, TV shows, foods, etc they like. Make sure to take notice of the child's ability to make eye contact during your conversation, because you will need that information to score the next item. Circle yes if the child can make at least two statements that follow the same topic (including answers to your questions, questions for you etc. as long as its on the same topic). If the child cannot do so, circle no. Give the child one point if the child gets a "no" and two points if the child gets a "yes."

Expected Score = 2
Average Score in 2004 = 2, SD = 0

84. E/S -Looks at person when speaking
Circle 1 if the child rarely made eye contact with you. Circle 2 if the child made eye contact sometimes. Circle 3 if the child did it frequently. You may wait to score this item until the end of the test administration. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 2.75, SD = 0.45

85. C/L -Put together 5-piece puzzle
Take out the puzzle and spread out the pieces in front of the child. Ask the child to put together the puzzle. Wait 30 seconds or so to see if the child can do it alone. If he/she cannot, give some assistance. If he/she still cannot give lots of assistance. Circle 1 if you end up putting the puzzle together without any help from the child. Circle 2 if the child does it with lots of assistance. Circle 3 if the child does it with some assistance. Circle 4 if the child does it alone. The number of points given is the number that you circled.

Expected Score = 4
Average Score in 2004 = 3.91, SD = 0.29

86. C/L -ID primary colors and secondary colors
Take out the laminated sheet that has the colors on it sheet. Ask child what color is this for three of the colors and ask child to show you which is the _____ circle for the other three colors. On the score sheet circle the names of the colors that the child is able to correctly identify (red, blue, yellow, orange, green, purple. Add up the number of colors correctly identified and circle that number. The number of points given is the number that you circled.

Expected Score = 6
Average Score in 2004 = 6, SD = 0

87. C/L -Understand in front of/behind/on top of/under/beside

Take out the post office and everything that comes with it (postman, bike, mailbox, packages, etc). Ask the child to:

1. put the yellow package *under* the blue package
2. put the mailbox *in front* of the post office
3. put the packages *on top* of the bike
4. put the bike *beside* the post office
5. put the postman *behind* the post office

You may change the explicit directions to whatever you want, just make sure you find out if the child understands all 5 terms/phrases. On the score sheet circle the items that the child is able to do correctly (in front of/behind/on top of/under/beside) Add up the number of items done correctly and circle that number. The number of points given is the number that you circled.

Expected Score = 5
Average Score in 2004 = 4.58, SD = 1.62

88. C/L -Sequences 3-part story that has been read

For this item you will need the Cowboy Critter book and the three pictures that depict scenes in the story. Read the child the story. Ask the child to put the pictures in the order that they happened. Circle 1 if the child can choose you the first part, circle two if the child can choose the first two parts in order, circle 3 if the child gets all three parts in the correct order. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 2.08, SD = 1.16

89. M -Folds paper 3 times

Hand the child a piece of paper. Ask the child to fold the piece of paper three times. You may demonstrate the task, but make sure that the child attempts the task with a new piece of paper. Circle 0 if the child does not make any folds, circle 1 if the child makes one fold, circle 2 if the child makes two folds, circle 3 if the child makes three folds. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0

90. C/L -Can follow 3 simple related successive directions in order
Put the scissors and a new piece of paper on the table. Ask the child to pick up the scissors, cut across the piece of paper, and put the scissors back in bucket. For this item only score the ability to follow the three directions. Score the child's cutting ability on the next item. Circle 1 if the child doesn't follow any of the directions. Circle 2 if the child picks up the scissors. Circle 3 if the child picks up the scissors and makes some attempt at cutting the paper. Circle 4 if the child is able to complete all three directions. The number of points given is the number that you circled.

Expected Score = 4
Average Score in 2004 = 4, SD = 0

91. M -Cuts across piece of paper with scissors
Observe whether or not the child is able to cut all the way across the piece of paper. Circle yes if the child is able to complete the task and no if the child cannot (does not cut all the way across the piece of paper, does not attempt, etc). Give the child one point if the child gets a "no" and two points if the child gets a "yes."

Expected Score = 2
Average Score in 2004 = 1.92, SD = 0.29

92. M -Draw circle
Hand the child a piece of paper and a crayon. Ask child to draw a circle. Circle yes if the drawing matches the acceptable guidelines (provided below) and circle no if it doesn't. This can be done after the test is administered, just be sure to keep the piece of paper. Give the child one point if the child gets a "no" and two points if the child gets a "yes."

Expected Score = 2
Average Score in 2004 = 2, SD = 0.48

93. M -Balances on 1 leg with hands on hips
Ask the child to stand on one foot and put their hands on their hips. You may demonstrate the task. Count to yourself as the child does so. Circle 1 if the child cannot do so. Circle 2 if the child can do so briefly (less than 2 seconds). Circle 3 if the child can do so for an extended period of time (greater than 2 seconds). The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0

94. M -Bounces and catches large ball
Get out the ball and ask the child to bounce it and then catch it. You may demonstrate the task. Give the child three attempts and score the child on their best of the three attempts. Circle 1 if the child can't do either. Circle 2 if the child can bounce the ball but cannot catch it. Circle 3 if the child can bounce and catch the ball. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 2.91, SD = 0.29

95. M -Jumps up at least 12 inches, landing on 2 feet
Tell the child you want to see how high they can jump. Ask them to jump as high as they can and to try and reach the ceiling. Circle 1 if the child attempts to jump but doesn't actually leave the ground. Circle 2 if the child jumps, but doesn't land on two feet. Circle 3 if the child jumps and lands on two feet. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0.29

96. M -Walks on tiptoe for 10 seconds
Now ask the child to walk across the room on tiptoes. You may demonstrate if necessary. Count while the child does so. Circle 1 if the child walks on tiptoes for less than 5 seconds. Circle 2 if they do so for greater than five seconds but less than 10. Circle 3 if they can do it for more than 10 seconds. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 2.83, SD = 0.58

97. M -Builds tower of 9+ blocks
Take out the blocks. Ask the child to build you the tallest tower they can build. Record the number of blocks in the tower (right before it falls) Circle 1 if the child doesn't stack any blocks. Circle 2 if the child stacks 2 blocks. Circle 3 if the child stacks three or four blocks. Circle 4 if the child stacks five or six blocks. Circle 5 if the child stacks six, seven, or eight blocks. Circle 6 if the child stacks nine or more blocks. The number of points given is the number that you circled.

Expected Score = 6
Average Score in 2004 = 5.83, SD = 0.39

98. M -Strings small beads
Take out the beads and the piece of string. Ask the child to make you a necklace. Circle yes if the child is able to do so and no if the child is unable to do so. Give the child one point if the child gets a "no" and two points if the child gets a "yes."

Expected Score = 2
Average Score in 2004 = 2, SD = 0

You will have to ask the teachers the following questions:
99. A/S –Must be potty trained
Ask the teacher if the child is potty trained. Explain that answering yes means that the child must have less than one accident per week. If the child has more than one accident per week you must circle no. Give the child one point if the child gets a "no" and two points if the child gets a "yes."

Expected Score = 2
Average Score in 2004 = 1.92, SD = 0.29

100. E/S –Shares toys/equipment
Ask the teacher if the child shares toys. Ask the teacher to choose between no, with prompting and, spontaneously/without prompting. Circle 1 for no, 2 for with prompting, and 3 for spontaneous/without prompting. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 2.67, SD = 0.49

Total Expected Score = 59 (Cognitive = 22, Motor = 27, Emotional = 8, Adaptive = 2)
Average Score in 2004 = 56.31, SD = 4.10 (Cognitive = 20.58, SD = 2.68:
Motor = 26.4, SD = 1.16: Emotional = 7.41, SD = 0.51: Adaptive = 1.92, SD = 0.29)

4 years

101. A/S -Know personal information (name/age/birthday)
Ask the child the following series of questions. On the score sheet, circle which ones the child answers correctly. (If the child can answer name, circle name etc.) Give the child one point for each question answered correctly. It will be necessary to write down the child's answers in the space provided on the score sheet so that you can check with the teacher to be sure that the child is actually answering correctly.

1. What is your name?
2. How old are you?
3. When is your birthday?

Expected Score = 3
Average Score in 2004 = 2.78, SD = 0.43

102. E/S -Solve problems using non-physical means (no biting, hitting)
Ask the child the following question. Circle yes if he/she responds with an appropriate answer (tell teacher, telling the offending child to stop, walking away, etc.). Circle no if the child says he/she would bite, hit, kick, punch, pinch, etc. the other child. Give the child one point if the child gets a "no" and two points if the child gets a "yes."

1. What would you do if you were playing with a ball on the playground and another kid came over and took the ball away from you?

Expected Score = 2
Average Score in 2004 = 2, SD = 0

103. C/L -Print own name
Hand the child a piece of paper and a pencil. Ask child to write their name on the top of the piece of paper. Circle yes if the child is able to write his/her name correctly and legibly and no if the child does not spell it correctly or does not write it legibly. Give the child one point if the child gets a "no" and two points if the child gets a "yes."

Expected Score = 2
Average Score in 2004 = 2, SD = 0

104. C/L –Print numbers from 1 to 10
On the same sheet of paper, ask child to "print the number ____." Repeat this for each of the numbers from 1 to 10. Circle 0 if the child does not answer any of the questions correctly. Circle 1 if the child answers one question correctly. Circle 2 if the child answers two questions correctly. Circle 3 if the child answers three or four questions correctly. Circle 4 if the child answers five or six questions correctly. Circle 5 if the child answers seven or more of the questions correctly. Additionally, on the scoring sheet, circle the numbers that the child prints correctly in response to your question. Scoring for this item can be done after administration as long as you make sure that you have kept the piece of paper. The number of points given is the number that you circled.

Expected Score = 5
Average Score in 2004 = 2.94, SD = 1.30

105. C/L –Draws square.
Flip the piece of paper over and ask the child to draw a square. Circle yes if the drawing matches the acceptable guidelines (provided below) and circle no if it doesn't. This can be done after the test is administered, just be sure to keep the piece of paper. Give the child one point if the child gets a "no" and two points if the child gets a "yes."

Expected Score = 2
Average Score in 2004 = 2, SD = 0.49

106. C/L -Draw person with 3 parts
If there is still room on the piece of paper, ask child to draw a picture of themselves. If there isn't room, give the child a new piece of paper. Count the number of body parts (head, legs, arms, eyes, nose, mouth, trunk, hands, ears, neck, feet, etc.) that the child draws. This can be done after the test is administered, just be sure to keep the piece of paper. Give the child one point for each part he/she draws. The maximum number of points that can be awarded is three.

Expected Score = 3
Average Score in 2004 = 2.89, SD = 0.32

107. C/L -Draws triangle
Ask child to draw triangle wherever there is room on the paper. If there isn't any room, give the child a new piece of paper. Circle yes if the drawing matches the acceptable guidelines (provided below) and circle no if it doesn't. This can be done after the test is administered, just be sure to keep the piece of paper. Give the child one point if the child gets a "no" and two points if the child gets a "yes."

Expected Score = 2
Average Score in 2004 = 1.67, SD = 0.49

108. C/L -Traces around own hand
Give the child a blank piece of paper (can be the back of a previously used sheet). Ask child to trace around his/her hand. Circle yes if the child is able to do so and no if the child is unable to do so. This can be done after the test is administered, just be sure to keep the piece of paper. Give the child one point if the child gets a "no" and two points if the child gets a "yes."

Expected Score = 2
Average Score in 2004 = 2, SD = 0

109. C/L -Colors within the lines of a circle
Hand the child the piece of paper with a circle drawn on it and a crayon. Ask the child to color in the circle. Circle if the child can't (he/she colors completely outside lines), circle 2 if the child colors somewhat outside of lines, and 3 if the child colors mostly inside the lines. The score sheet must be marked for this item before you proceed to the next item. The number of points given is the number that you circled.

Expected Score 3
Average Score in 2004 = 2.88, SD = 0.32

110. M -Cut successfully with scissors
After you have scored the child on the previous item, hand the child a pair of scissors and ask the child to cut out their circle along the dotted. Circle yes if the child is able to do so (their cut should be between the solid lines) and no if the child is unable to do so (the cut is not between the solid lines). This can be done after the test is administered, just be sure to keep the piece of paper. Give the child one point if the child gets a "no" and two points if the child gets a "yes."

Expected Score = 2
Average Score in 2004 = 1.94, SD = 0.24

111. C/L -Matches like items based on appearance and function
Place the cards of the mother and baby animals face up in front of the child. Ask the child to put the baby animal next to his/her mommy. Circle 0 if the child does not correctly match any of the cards, circle 1 if the child matches one pair, 2 if the child matches two pairs, and 3 if the child matches three pairs. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0

112. C/L -Understand concepts of size (small, medium, large)
Place the different size pencils in front of the child. Ask the child to order the sticks from smallest to biggest. Circle yes if the child is able to do so and no if the child is unable to do so. Give the child one point if the child gets a "no" and two points if the child gets a "yes."

Expected Score = 2
Average Score in 2004 = 2, SD = 0

113. C/L-Determines which of 2 groups has more/less
Take out the laminated sheet with the groups of shapes on it. Ask the child which of the first two groups has more. Ask the child which of the second group has less. Circle 0 if the child does not correctly answer either question, circle 1 if the child correctly answers one, and 2 if the child correctly answers both questions. On the scoring sheet for this item you will see the words more and less. In addition to circling 0, 1, or 2, circle "more" if the child is able to say which has more and circle "less" if the child is able to answer which group has less. A child who answers both questions correctly should receive a 2 and should have more and less circled on their scoring sheet.

Expected Score = 2
Average Score in 2004 = 1.5, SD = 0.62

114. C/L -Understands numbers to five
Take out the laminated sheet that has groups of items on it. Ask the child to count the number of items in each group. Circle 0 if the child does not correctly count any of the groups. Circle 1 if they count the group with 1 item correctly. Circle 2 if they count the group with 2 items correctly. Circle 3 if they count the group with 3 items correctly. Circle 4 if they count the group with 4 items correctly. Circle 5 if they count the group with 5 items correctly. The number of points given is the number that you circled.

Expected Score = 5
Average Score in 2004 = 5, SD = 0

115. C/L -Understands shape
Take out the laminated sheet with the various shapes on it. Ask the child "which shape is this?" On the scoring sheet, circle the names of the shape (circle, square, triangle, rectangle, star, heart, horseshoe, and moon) that the child is able to identify correctly. Add up the number of shapes that the child can correctly identify. Give the child 1 point if they correctly identify one shape, 2 points if they can identify two or three, 3 if they can identify four or five, 4 if they can identify 6 or 7, and 5 points if they correctly identify all eight. The scoring for this item can be done after administration as long as you make sure that you circle the names of the shapes that the child identifies. The number of points given is the number that you circled.

Expected Score = 5
Average Score in 2004 = 5, SD = 0

116. C/L -Counts orally to 10
Ask child to count to ten. Circle yes if the child is able to do so and no if the child is unable to do so. Give the child one point if the child gets a "no" and two points if the child gets a "yes."

Expected Score = 2
Average Score in 2004 = 2, SD = 0

117. C/L -Identify letters of alphabet
Take out the laminated sheet of paper with the letters on it. Ask child which letter is this or show me the letter A. Use only the letters ABCDEF and the letters in the child's name. Ask the child about 5 letters. Ask them "which letter is this" for three different letters. Ask the child to "show me the letter ___" for two different letters. Record the number of correct answers given as well as the letters used. In the space provided on the scoring sheet. Circle 0 if the child does not answer any of the questions correctly. Circle 1 if the child answers one question correctly. Circle 2 if the child answers two questions correctly. Circle 3 if the child answers three questions correctly. Circle 4 if the child answers four questions correctly. Circle 5 if the child answers five of the questions correctly. The number of points given is the number that you circled.

Expected Score = 4
Average Score in 2004 = 3.78, SD = 0.55

118. C/L -Recognize numbers from 1 to 10
Take out the laminated sheet of paper with the numbers on it. Ask the child "what number is this" for each of the numbers written on the sheet. Record the number of correct answers that the child gives. Circle 0 if the child does not answer any of the questions correctly. Circle 1 if the child answers one question correctly. Circle 2 if the child answers two questions correctly. Circle 3 if the child answers three or four questions correctly. Circle 4 if the child answers five or six questions correctly. Circle 5 if the child answers seven or more of the questions correctly. Scoring for this item can be done after administration as long as you make sure that you have recorded the number of correct answers that the child gives. The number of points given is the number that you circled.

Expected Score = 5
Average Score in 2004 = 3.67, SD = 0.77

119. C/L -Recognize own name
Take out the sheet with the class list on it. Show the child list of names and ask which one is his. Circle yes if the child is able to do so and no if the child is unable to do so. Give the child one point if the child gets a "no" and two points if the child gets a "yes."

Expected Score = 2
Average Score in 2004 = 1.94, SD = 0.24

120. M -Hop on 1 foot without support
Ask the child to hop on one foot, without holding onto anything. Circle one if the child can't do it at all. Circle 2 if the child can do it briefly. Circle 3 if the child can do it for an extended period of time. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 2.94, SD = 0.24

121. C/L -Follow 3 step unrelated directions
Ask the child to push in their chair, pick up the ball, and come with you outside. Circle yes if the child is able to do so and no if the child is unable to do so. Give the child one point if the child gets a "no" and two points if the child gets a "yes."

Expected Score = 2
Average Score in 2004 = 2, SD = 0

Take the child outside to the playground.

122. M -Kicks large ball when its been rolled to them
Tell the child that you are going to roll a ball to him/her and that you want him/her to kick it back to you. Roll ball to child three times. Score the child on their best of the three attempts (the highest skill level achieved in the three attempts). Circle 1 if the child does not kick the ball. Circle 2 if the child swings and misses. Circle 3 if the child is able to kick the ball. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0

123. M -Throw and catch a large ball
Tell the child that you are going to play catch. Tell them that you will throw the ball to him/her and that you want him/her to throw it back to you. (Throwing to the child and having it thrown back is 1 attempt. Give the child 3 attempts and score the child on their best of the three attempts (the highest skill achieved). Circle 1 if doesn't catch or throw, 2 if the child is able to throw but doesn't catch, 3 if the child can throw + catch but can't hold on to the ball, and 4 if the child can throw and catch. The number of points given is the number that you circled.

Expected Score = 4
Average Score in 2004 = 4, SD = 0

124. M –Jumps forward with 2 feet
Ask the child to jump forward using both feet, circle yes if the child is able to do so and no if the child is unable to do so. Give the child one point if the child gets a "no" and two points if the child gets a "yes."

Expected Score = 2
Average Score in 2004 = 2, SD = 0

Bring the child back inside

126. A/S –Buttons small buttons
Give the child the shirt and ask them to put it on and button it. Assisting the child in putting the shirt on correctly (i.e. getting their arms through the sleeves) does not count as assistance when scoring. When scoring only assess whether they can do the buttons. Circle one of the child cannot button the shirt at all, circle 2 if the child can do it with your assistance, and circle 3 if the child can do it without your assistance. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 3, SD = 0

You will have to ask the teachers the following questions:

127. A/S –Cleans up
Ask the teacher what the child does when the teacher asks him/her to clean up. Circle 1 if the teacher says the child doesn't do anything, circle 2 if the child will pick up if the teacher continuously prompts the child, and circle 3 if the child will do it if the teacher only asks once. You may give the teacher the options and ask them to choose which one fits the child. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 2.72, SD = 0.46

128. E/S -Solve problems using non-physical means (no biting, hitting)
Ask the teacher if the child is able to solve problems using non-physical means. Circle 1 if the teacher says the child does so rarely, 2 if the child does so sometimes, and 3 if the child does so most of the time. You may give the teacher the options and ask them to choose which one fits the child. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 2.61, SD = 0.50

129. M -Walks downstairs with alternating feet without holding handrail
Ask the teacher if the child is able to walk down the stairs using alternating feet without using the handrail. Circle yes if the teacher says yes and no if the teacher says no. Give the child one point if the child gets a "no" and two points if the child gets a "yes."

Expected Score = 2
Average Score in 2004 = 2, SD = 0

130. M –Pumps legs while swinging
Ask the teacher if the child pumps his/her legs while swinging. Circle 1 if the teacher says the child doesn't, 2 if the child does so with prompting, and 3 if the child does so without prompting/spontaneously. You may give the teacher the options and ask them to choose which one fits the child. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 2.94, SD = 0.24

131. A/S -Care for own belongings
Ask the teacher if the child hangs up his/her coat upon arriving at school. Circle 1 if the teacher says the child doesn't, 2 if the child does so with prompting, and 3 if the child does so without prompting/spontaneously. You may give the teacher the options and ask them to choose which one fits the child. The number of points given is the number that you circled.

Expected Score = 3
Average Score in 2004 = 2.94, SD = 0.24

132. A/S –Is completely potty trained
Ask the teacher if the child is completely potty trained. Explain that a "yes" means that the child only has accidents at naptime and that they occur 2 or fewer times a month. If the child has more two accidents a month or any that occur outside of naptime then you should circle no. Give the child one point if the child gets a "no" and two points if the child gets a "yes."

Expected Score = 2
Average Score in 2004 = 2, SD = 0

Total Expected Score = 89 (Cognitive = 51, Motor = 19, Emotional = 5, Adaptive = 14)
Average Score in 2004 = 83.16, SD = 3.75 (Cognitive = 46.27, SD = 2.89:
Motor = 18.83, SD = 0.51: Emotional = 4.61, SD = 0.50: Adaptive = 13.44, SD = 0.70)

YBR Screening Report Child's Name Age

Up to 12 months									
Item Number	Domain	Score	Refuses						
1. Basic Emotion	E/S			0	1	2	3	Fear	happiness ?sad anger
2. Matches Expression	E/S				1	2	3		
					rarely	sometimes	often		
3. Social Referencing	E/S				1	2	3		
					rarely	sometimes	often		
4. Pincer Grasp	M			No (1)	Yes (2)				
5. Finds Objects	C/L				1	2	3		
					no attempt	does not find	finds		
6. 3-5 Steps	M				1	2	3	4	
					falls	1-2 steps	3-4 steps	4+ steps	
7. Patty Cake	M			No (1)	Yes (2)				
				won't play	plays				
Observed in classroom									
8. No/Stop/All Gone/More	C/L				1 2	3 4	no stop	all gone	more
9. Preverbal Gestures	C/L			No (1)	Yes (2)				
				does not	uses gesture				
10. Sits Alone	M				1	2	3		
					can't	briefly	extended		
11. Pulls to Stand	M				1	2	3	4	
					no attempt	begins to	falls	can do so	
12. Lifts Cup to Mouth	A/S				1	2	3		
					can't	awkwardly	comfortably		

12-18 Months								
Item Number	Domain	Score	Refuses					
13. Signs of Empathy	E/S			No (1)	Yes (2)			
14. Recognizes Self	E/S				1	2	3	4
				touches:	mirror	mirror then body	body	nose
15. Simple Directions	C/L				1	2	3	
					rarely	sometimes	often	
16. Stacks 2+ Blocks	M			0	1	2		
				no blocks	1 block	2+ blocks		
Observed at snack/mealtime								
17. Manipulates Cheerios	M			No (1)	Yes (2)			
18. Feeds Self w/ Spoon	A/S				1	2	3	
					can't	awkwardly	comfortably	

18-24 months								
Item Number	Domain	Score	Refuses					
19. Sits in chair	M			No (1)	Yes (2)			
20. Self-conscious emotion	E/S				1	2	3	
					rarely	sometimes	often	
21. Emotional terms	E/S			0	1 2	3	happy	sad
22. Hi/bye/thank you	E/S				1	2	3	
					rarely	sometimes	often	
23. Names familiar objects	C/L			0	1 2	3	4	
					(# questions	answered	correctly)	
24. Echos spoken words	C/L			No (1)	Yes (2)			
25. Points to pictures	C/L			0	1 2	3	4	
					(# questions	answered	correctly)	
26. One step directions	C/L				1	2	3	
					rarely	sometimes	often	
27. Jumps in place	M			No (1)	Yes (2)			
28. Runs length of room	M			No (1)	Yes (2)			
29. Stands on 1 foot	M			No (1)	Yes (2)			
30. Stacks 4+ blocks				0	1	2	3	4
				no blocks	2 blocks	3 blocks	4-5 blocks	6+ blocks
31. Zips/unzips zipper	A/S				1	2	3	
					can't	w/ help	w/o help	

Observed at snack/mealtime								
32. Unwraps enclosed food	A/S				1	2	3	
					can't	w/ help	w/o help	
33. Uses fork and spoon	A/S				1	2	3	
					can't	awkwardly	comfortably	
34. Drinks from cup	A/S				1	2	3	
					can't	awkwardly	comfortably	
						(lots of spills)	(few spills)	
Ask teacher								
35. 3-5 word phrases	C/L			No (1)	Yes (2)			
36. Removes clothes	A/S				1	2	3	
without help					can't	w/ help	w/o help	
37. Uses slide appropriately	M			No (1)	Yes (2)			
38. Uses pronouns	C/L			No (1)	Yes (2)			

2 years								
Item Number	Domain	Score	Refuses					
39. 2 part directions	C/L			No (1)	Yes (2)			
40. Stacks 6+ blocks	M			0	1	2	3	4
				no blocks	2-3 blocks	4-5 blocks	6-7 blocks	8+ blocks
41. Counts to 3 (orally)	C/L			0	1	2	3	
				can't count	says 1	says 1, 2	says 1,2,3	
42. Combines 2+ words	C/L							
					1	2	3	
					1 word	2 word	3+ word	
					utterances	utterances	utterances	
43. Stands on 1 foot	M				1	2	3	
					can't	less than 4 sec.	more than 4 sec	
44. Jumps 4 in. forward	M			No (1)	Yes (2)			
45. Walks forwards and	M			0	1	2		forward
backwards on line				neither	one	both		
46. Walks on tiptoe	M			0	1	2		
				can't	less than	more than		
					4 steps	4 steps		
47. Puts toys away	A/S			0	1	2	3	
				won't pick	will do so with	with constant	asking once	
				up	you	reinforcement		
48. ID own belongings				No (1)	Yes (2)			
	E/S			0	1	2	3	

49. Names his/her own sex								
					(# questions	answered	correctly)	
50. Knows age	E/S			No (1)	Yes (2)			
51. Says please/thank you	E/S				1	2	3	
					never	with prompting	on own	
Observe at snack/mealtime								
52. Eats with fork/spoon	E/S				1	2	3	4
					can't hold them	can hold but	uses	uses all
						doesn't use	sometimes	of time
Ask teacher								
53. Begins potty training	A/S			No (1)	Yes (2)			
					the child will try			
					to use potty			
54. Engages in role playing	E/S			No (1)	Yes (2)			
55. Greets familiar adults	E/S				1	2	3	
					never	with prompting	on own	

2.5 years								
Item Number	Domain	Score	Refuses					
56. Begins to use shapes	C/L			0 1	2 3	4 5	circle	square
				(# shapes	identified)		rectangle	star
							horeshoe	moon
57. Begins to use colors	C/L			0 1	2 3	4 5	red	blue
				(# colors	identified)		orange	green
58. Uses scissors	M				1	2	3	4
					can't hold them	holds scissors	holds	cuts
						correctly	scissors & paper	paper
59. Uses glue stick	M				1	2	3	
					object not glued	somewhat glued	glued on	
					on at all	on		
60. Washes hands	A/S				1	2	3	
					cannot do w/o	a little bit of	with no	
					assistance	assistance	assistance	
61. Names pictures	C/L			0	1	2	3	4
					(# pictures	correctly IDed)		
62. Catches ball	M				1	2	3	
(score highest of 3 attempts)					can't catch	caught, but it	caught and	
						slipped	held on	
63. Swings leg to kick ball	M			No (1)	Yes (2)			
(score highest of 3 attempts)								
Ask teacher								
64. Follows rules	E/S				1	2	3	
					rarely	sometimes	often	

3 years								
Item Number	Domain	Score	Refuses					
Do 1st 3 before leaving classroom								
65. Responds to greetings	E/S			No (1)	Yes (2)			
66. Names a friend	E/S			No (1)	Yes (2)			
					child must ID			
					two friends			
67. Responds to questions	E/S				1	2	3	
					rarely	sometimes	often	
Now go to testing location								
68. Uses 3 finger grasp	M				1	2	3	
					can't	awkwardly	comfortably	
69. IDs/Counts 1-4	C/L			0	1	2	3	4
					(# groups IDed correctly)			
70. Big/little	C/L			0	1	2		big
					(# questions answered right)			
71. IDs sounds	C/L			0 1	2 3 4	5 dog	cow drum	horn
72. Makes bridge	M				1	2	3	
					can't	gets 2 blocks	finishes	
73. Jumps over rope	M			No (1)	Yes (2)			
74. Fastens/unfastens	M				1	2	3	
large buttons					can't	does w/ help	w/o help	
75. Takes off shoes	A/S				1	2	3	
					can't	does w/ help	w/o help	

76. Puts on socks/shoes	A/S				1	2	3	4
(does not have to tie)					can't do	does w/ help	socks alone	socks
							help w/	and shoes
							shoes	alone
Ask teacher								
77. Combines sentences	C/L			0	1 2	3	and	or
78. Expresses needs verbally	C/L			No (1)	Yes (2)			
79. Exchanges items for play	E/S				1	2	3	
					will not	will if the teacher	on own	
						tells him to		
80. Interacts in group play	E/S			No (1)	Yes (2)			
81. Can sit and listen to story	E/S				1	2	3	
					rarely	sometimes	often	
82. Must be potty trained	A/S			No (1)	Yes (2)			
					(less than 2	accidents a week)		

3.5 years								
Item Number	Domain	Score	Refuses					
83. Conversation	E/S			No (1)	Yes (2)			
					(at least 2 statements)			
84. Looks at person when	E/S				1	2	3	
speaking					no eye contact	some	frequent	
85. 5-piece puzzle	C/L				1	2	3	4
					can't	with lots help	some help	alone
86. Identifies colors	C/L			0 1	2 3 4	5 6	red	blue
					(# colors IDed)		orange	green
87. Understands in front of/	C/L							
behind/on top/under/beside				0 1	2 3 4	5 6	in front	behind
					(# terms understood)		under	beside
88. Sequences 3 part story	C/L				1	2	3	
					can tell first	first 2 parts	all 3 parts	
89. Folds paper 3 times	M			0	1	2	3	
				no folds	1 fold	2 folds	3 folds	
90. 3 directions in order	C/L				1	2	3	4
					doesn't follow	picks up scissors	picks up	all 3
					any directions		and trys	directions
							to cut	
91. Cuts across paper	M			No (1)	Yes (2)			
					cuts all the way across the paper			
92. Draws circle	M			No (1)	Yes (2)			
					matches guidelines			

93. Balances on 1 leg	M				1	2	3	
					can't	less than 2 sec	2+ sec.	
94. Bounces/catches ball	M				1	2	3	
(score highest of 3 attempts)					can't do either	bounces but	can do both	
						can't catch		
95. Jumps 12 in and lands	M				1	2	3	
on 2 feet					can't	doesn't land on	completes	
						2 feet	task	
96. Walks on tiptoe	M				1	2	3	
					less than 5 sec	5-9 sec	10+ sec	
97. Stacks 9+ blocks	M			1	2	3	4	5
				no blocks	2 blocks	3-4 blocks	5-6 blocks	7-8 blocks
98. Strings small beads	M			No (1)	Yes (2)			
Ask teacher								
99. Potty trained	A/S			No (1)	Yes (2)			
					no more than 1 accident per week			
100. Shares toys	E/S				1	2	3	
					will not	will w/ prompting	on own	

4 years								
Item Number	Domain	Score	Refuses					
101. Knows personal info	A/S			0	1 2	3 4	name age	birthday
102. Solves problems	E/S			No (1)	Yes (2)			
				hit/punch/	walk away/tell			
				kick/etc.	teacher/etc.			
103. Prints name	C/L			No (1)	Yes (2)			
104. Prints numbers	C/L			0 1	2 3	4 5	1 2 3 4	5 6 7
105. Draws square	C/L			No (1)	Yes (2)			
					matches guidelines			
106. Draws person	C/L			0	1	2	3+	
					(# body parts drawn)			
107. Draws triangle	C/L			No (1)	Yes (2)			
					matches guidelines			
108. Traces hand	C/L			No (1)	Yes (2)			
109. Colors in lines	C/L				1	2	3	
					totally outside	somewhat outside	mostly in	
					the lines	the lines	lines	
110. Cuts successfully	M			No (1)	Yes (2)			
					cut is between the solid lines			
111. Matches like items	C/L			0	1	2	3	
					(# pairs matched)			
112. Understands size	C/L			No (1)	Yes (2)			

113. Understands more/less	C/L			0	1	2		more
					(# questions answered correctly)			
114. Understands numbers	C/L			0 1	2 3	4 5	0 1	2 3
					(# questions answered correctly)			(numbers underst
115. Understands shape	C/L			1	2	3	4	5
			identifies:	1 shape	2-3 shapes	4-5 shapes	6-7 shapes	8 shapes
			circle	square	triangle	rectangle	star heart	horseshoe
116. Counts to 10	C/L			No (1)	Yes (2)			
117. Identifies letters	C/L			0	1	2	3	4
						(# letters correctly identified)		
				Letters used:				
118. Recognizes numbers	C/L			0	1	2	3	4
				0 numbers	1 number	2 numbers	3-4 #s	5-6 #s
119. Recognizes name	C/L			No (1)	Yes (2)			
120. Hops on 1 foot	M				1	2	3	
					can't	briefly	extended	
121. Follows 3 step directions	C/L			No (1)	Yes (2)			
Take child outside								
122. Kicks rolled ball	M				1	2	3	
(score highest of 3 attempts)					doesn't kick	swings but misses	kicks ball	
123. Throws and catches	M				1	2	3	4

(score highest of 3 attempts)					doesn't do either	throws but can't	throws and	throws and
						catch	catches but	catches
							can't hold on	
124. Jumps forward using 2	M			No (1)	Yes (2)			
feet								
Bring child back inside								
125. Laces card	M			No (1)	Yes (2)			
126. Buttons small buttons	A/S				1	2	3	
					can't button	with help	w/o help	
Ask teacher								
127. Cleans up	A/S				1	2	3	
					won't	with prompting	asking once	
128. Solves problems	A/S				1	2	3	
					rarely	sometimes	often	
129. Walks downstairs	M			No (1)	Yes (2)			
alternating feet w/o holding on								
130. Pumps legs to swing	M				1	2	3	
					doesn't	with prompting	w/o prompt	
131. Cares for belongings	A/S				1	2	3	
					doesn't	with prompting	w/o prompt	
132. Potty trained	A/S			No (1)	Yes (2)			
					2 or fewer accidents a month and they must be at naptime			

Appendix B
YBR Informed Consent

Dear Parents;

Enclosed you will find a letter from Lauren Egbert, a senior at W&L. Last spring I had the opportunity to work with Lauren in forming a measurement tool to assess the behavioral objectives we developed for the children at YBR. Both the behavioral objectives and the assessment tool are necessary to continue funding from the Rockbridge Area United Way.

Out come measurement is necessary to insure the money given from the United Way is spent to provide increased educational opportunities for our children at YBR. All information will be shared with you and while the outcome will be part of Lauren's thesis the names of our children will be kept confidential. Lauren will work with the children in the fall and then follow up again in the spring. Please be assured I will monitor this activity very carefully.

Thank you so much for your continued help and cooperation.

Sincerely,

Pam Toney

I agree to have my child_____ participate in this assessment
Child's name

program affiliated with the psychology department, the United Way and Yellow Brick Road.

_____ _____
Parent's signature Child's birthday

Experimenter's Informed Consent

Description of Study
In this study your child will be given age appropriate tasks to determine if they are able to complete the same tasks that other children their age can accomplish. They will be asked to do a wide variety of things (that vary based on their age) that will demonstrate their motor, cognitive, social, emotional, and self-help skills. For example, children could be asked to recognize colors or familiar items or stand on one foot. Scores for all children at YBR will then be evaluated to see if there are any areas that need improvement. The results from this study will be based on group trends, not individual responses. Other than this sheet of paper, your child's name will never be associated with any of this information or his or her scores.

Risks and Benefits
Your child is **not** expected to experience any physical or psychological discomfort based on his or her participation in this study.

Confidentiality and Security of Data
Only the principle investigators of this study (Lauren Egbert, Dr. Nancy Margand, and Pam Toney) will have access to the data collected in this study. Your child's name and data will remain separate and will never be associated with each other. Reported results from this study will be based on group trends in the data, not individual responses. Published papers resulting from this research will not include any information that could identify your child.

Contact Person
If you have any questions, comments, or concerns about this research, please contact Lauren Egbert (463-1725), Dr. Nancy Margand, Professor of Psychology at Washington and Lee University (240 Parmly Hall, 458-8835), or Pam Toney, Director of Yellow Brick Road Early Learning Center (123 West Washington Street, 463-4635).

Consent to Participate
Please read the following:
I have read and understand the information presented above, and I have voluntarily decided to allow my child to participate in this study. The experimenter has adequately answered questions I have about this research and my child's participation in it. I understand that I may voluntarily terminate my child's participation at any time and may refuse to answer any question(s) that I do not want to answer.

If you have any remaining questions, please ask them at this time. If you give consent for your child to participate in this study, please sign below.

Child's Name_____ Child's Age_____

Signature of Parent/Guardian _____Date_____

Demographics

1. Child's Name_____

2. Child's Teacher_____

3. Child's Age_____

4. Child's Birthdate_____

5. Child's Sex_____

6. Number of Years at Yellow Brick Road_____

7. Number of Years at other similar schools_____

8. Who does your child live with? Please circle all that apply.

Biological mother	Biological father	Siblings
Stepmother	Stepfather	Cousins
Grandmother	Grandfather	Other children
Other adult female	Other adult male	

9. How many years of school have the adults in your household attended? What is the highest level of education each has achieved (high school, college, hours beyond college)?

_____

_____

10. In general, what sort of jobs do the adults in family hold?

_____

Appendix C

Debriefing

Thank you for allowing your child to participate in the testing. The data collected from your child will be very helpful in completing my study and in planning classroom activities at Yellow Brick Road that will help your child attain a maximum level of success. In the course of testing it was discovered that your child had somewhat more difficulty than other children his/her age completing the following tasks. It is important to remember that often times all that is needed is a little bit of practice with the skills. Please don't hesitate to contact me (463-1725 or egbertl@wlu.edu) if you would like any ideas or assistance or if you are interested in seeing the results of the study. Thanks again for allowing your child to participate.

Debriefing

Thank you for allowing your child to participate in the testing. The data collected from your child will be very helpful in completing my study and in planning classroom activities at Yellow Brick Road that will help your child attain a maximum level of success. Your child showed no difficulty in completing the given tasks and we did not identify any problem areas. Please continue to work with your child on advancing his or her skills to continue to ensure future academic success. Please don't hesitate to contact me (463-1725 or egbertl@wlu.edu) if you have any further questions or if you are interested in seeing the results of the study. Thanks again for allowing your child to participate.