UNCP THESIS FORM 4
FINAL ORAL EXAMINATION

Student Name: Jamie Willis

Banner ID Number: 840029927

Thesis Title: The Correlation of Artistic Levels of Development & Reading Comprehension in Elementary Students

The above named student successfully completed the final oral examination on Nov. 15, 20 11.

The thesis was:

✓ **approved as presented.**

____ **approved with the following changes:**

_____

_____

____ **not approved.**

Ann Hurston Lopez	Ann Hurston Lopez	11-14-11
Thesis Advisor (Print)	**Signature**	**Date**
Tulla Lightfoot	Tulla Lightfoot	11/15/11
Committee Member (Print)	**Signature**	**Date**
Alfred Bryant	Alfred Bryant	11-15-11
Committee Member (Print)	**Signature**	**Date**

This form should be forwarded to the Dean of the School of Graduate Studies by the thesis advisor.

The Correlation of Artistic Levels of Development and Reading Comprehension in Elementary Students

Prepared By:

Jamie B. Willis

In partial fulfillment of the requirements for the
Degree in Master of Arts in Art Education

Abstract

The primary purpose of this study was to investigate the correlation between artistic development and reading comprehension levels in a selected group of elementary students. The subjects for the study were thirty-four third grade students from a rural elementary school in North Carolina. A portfolio of artwork was collected and the STAR Reading test was given to each student three times during the year of study. Data was collected and compiled using artistic development levels and instructional reading levels. Students fell into the Pre-schematic stage, Schematic stage, Dawning Realism stage or Pseudo Realistic stage based on Lowenfeld's Stages of Artistic Development. Instructional Reading Levels (IRL) were determined by the STAR Reading Test and ranged from Preprimer to 6.9 (sixth grade ninth month) during the study period. Comparisons and correlations were made based on the findings. No consistent correlations were found between artistic development and reading comprehension. Age levels, grade levels, exceptionalities, time devoted to the topics and even teaching habits all had an impact on student performance. Exposure and support to the arts and reading habits also had an impact on student accomplishments. There were no standards for all of the students as each child developed at their own pace.

Acknowledgements

I wish to thank everyone who helped me on this endeavor. I will list no names because I will surely leave out someone. Thanks to the drawers, the readers, the testers, the evaluators, the proofers, the listeners and especially "Daddy Daycare" for picking up my slack while working on this project. I love all you guys and now I owe you one!

Table of Contents

Introduction

According to Lowenfeld and Brittain[i], if objects in children's drawings are unrelated to each other (pre-schematic stage of artistic development) then the children cannot relate letters to each other and are not ready to learn to read.[ii] In education today, students are exposed to different curricula and expectations. They are expected to start reading at an earlier age despite the fact they may not be cognitively ready to read and comprehend what they read.[iii] In 1981, Mona Brooks, author of *Drawing with Children*[iv], held art workshops in California and concluded that after students took her drawing classes; the students started remembering letters of the alphabet and reading levels jumped.[v] Allen G. Richards, author of the article *Arts and Academic Achievement in Reading: Functions and Implications* says, "To prepare the very young students to be observant, distinguish sounds, look for details, expand vocabulary and comprehension, recognize colors and shades and enrich critical thinking skills, they begin the school year with the arts". These authors have made a link between visual arts and reading thus warranting evidence of the correlation of artistic levels and reading comprehension in today's education of elementary students.

Hypothesis:

There is no correlation between the stages of artistic development and reading comprehension levels of third grade elementary students.

Statement of the Research Problem:

The purpose of this investigation is to examine the correlation between stages of artistic levels of development and reading comprehension levels of elementary students.

Statement of the Research Questions:

The questions for investigation are: 1) to what extent is the correlation between stages of artistic levels of development and the student's STAR Reading Comprehension test scores?[vi] 2) how do students who are reading below grade level in reading comprehension compare to students who are reading above grade level in reading comprehension in the area of artistic development? 3) to what extent are the differences in artistic development when comparing the Learning Disabled in Reading students to the Academically Intellectually Gifted students?

Considerations:

The following considerations may have an impact on the study's findings: 1) some students may be mentally or physically impaired and are not on the same cognitive level as their peers. 2) some students may have physical impairments (temporary or permanent) that may inhibit their artistic ability. 3) some students may be learning disabled in reading, even though their IQ may range from educable to above average. 4) there may be age differences in the students of the same grade level due to delayed start into school or repeaters of the same

grade. 5) some students suffer from test anxiety due to timed test, thus not making the STAR Reading program a reliable measure of comprehension in all students.

Significance of the Study:

If there is a correlation between artistic levels of development and reading comprehension levels, it will provide teachers and administrators insight into the relationship between the two content areas. The findings may provide teachers with useful information that can be used to help with reading instruction while using the visual arts as an avenue of instruction for the lower level readers.

Assumptions and Limitations:

Some limitations to the study are the stresses of timed tests and/or activities. The STAR Reading test is timed so it may cause anxiety for some students who do not perform well in this situation. The drawing exercises are to be completed in one art class period of forty-five minutes, which may not allow the students who are perfectionist enough time to complete their artwork. Targeted students may be eliminated from the study due to absence during testing or art activities, thus making it impossible to track changes over time. Students, who were initially included in the study, may transfer out of the school system, which would eliminate them from the study.

Literature Review

This study examines the correlation between the artistic stages of development and reading comprehension of third grade students. Much has been written and debated about the stages of children's artistic development. In 1947, Viktor Lowenfeld wrote one of the most influential art education textbooks entitled *Creative and Mental Growth*.[vii] The book's first publication was in 1947, and is currently printed in its eighth edition, with the collaboration of W. Lambert Brittain since the passing of Viktor Lowenfeld. They are most notably known for their writings of the Artistic Stages of Development. The following definitions are taken from Jim Brutger, an Art Education Professor from the University of Minnesota, and are based on a summary from Lowenfeld's *Creative and Mental Growth*.[viii]

1. SCRIBBLE (2 to 4 years)

The scribble stage is made up of four sub-stages. (a) *Disordered* - uncontrolled markings that could be bold or light depending upon the personality of the child. At this age, the child has little or no control over motor activity. (b) *Longitudinal* - controlled repetitions of motions. Demonstrates visually an awareness and enjoyment of kinesthetic movements. (c) *Circular* - further exploring of controlled motions demonstrating the ability to do more complex forms. (d) *Naming* - the child tells stories about the scribble. There is a change from a kinesthetic thinking in terms of motion to imaginative thinking in terms of pictures. This is one of the great occasions in the life of a human. It is the development of the ability to visualize in pictures.

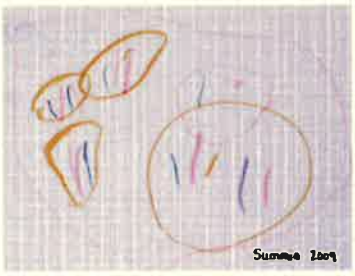


Figure 1: Scribble drawing[ix]

2. PRESCHEMATIC (4 to 6 years)

The preschematic stage is announced by the appearance of circular images with lines which seem to suggest a human or animal figure. During this stage the schema (the visual idea) is developed. The drawings show what the child perceives as most important about the subject. There is little understanding of space - objects are placed in a haphazard way throughout the picture. The use of color is more emotional than logical.

Figure 2: Preschematic drawing[x]

3. SCHEMATIC (7 to 9 years)

This stage is easily recognized by the demonstrated awareness of the concept of space. Objects in the drawing have a relationship to what is up and what is down. A definite base and sky line is apparent. Items in the drawing are all spatially related. Colors are reflected as they appear in nature. Shapes and objects are easily definable. Exaggeration between figures (humans taller than a house, flowers bigger than humans, family members large and small) is often used to express strong feelings about a subject. Another technique sometimes used is called "folding over" this is demonstrated when objects are drawn perpendicular to the base line. Sometimes the objects appear to be drawn upside down. Another Phenomenon is called "X-ray". In an x-ray picture the subject is depicted as being seen from the inside as well as the outside.

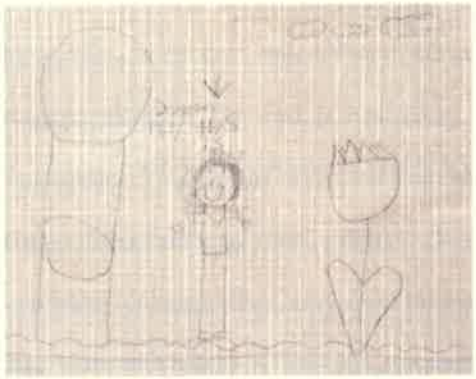


Figure 3: Tree, boy and flower[xi]

4. DAWNING REALISM (9 to 11 years)

Dawning realism is also known as the gang age. Group friendships of the same sex are most common. This is a period of self awareness to the point of being extremely self critical. The attempts at realism need to be looked at from the child's point of view. Realism is not meant to be real in the photographic sense rather than an experience with a particular object. In this regard this stage is the first time that the child becomes aware of a lack of ability to show objects the way they appear in the surrounding environment. The human is shown as girl, boy, woman, man clearly defined with a feeling for details often resulting in a "stiffness" of representation. Perspective is another characteristic of this stage. There is an awareness of the space between the base line and sky line. Overlapping of objects, types of point perspective and use of small to large objects are evident in this stage. Objects no longer stand on a base line. Three dimensional effects are achieved along with shading and use of subtle color combinations. Because of an awareness of lack of ability drawings often appear less spontaneous than in previous stages.

5.THE PSEUDOREALISTIC STAGE (ll to 13 years)

In the previous stages the process in making the visual art was of great importance. In this stage the product becomes most important to the child. This stage is marked by two psychological differences. In the first, called Visual, the individual's art work has the appearance of looking at a stage presentation. The work is inspired by visual stimuli. The second is based on subjective experiences. This type of Nonvisual individual's art work is based on subjective interpretations emphasizing emotional relationships to the external world as it relates to them. Visual types feel as spectators looking at their work from the outside. Nonvisually minded individuals feel involved in their work as it relates to them in a personal way. The visually minded child has a visual concept of how color changes under different external conditions. The nonvisually minded child sees color as a tool to be used to reflect emotional reaction to the subject at hand.[xii]

All children are different and they advance from one stage to another at different rates. Along with this, as children change, their artwork does as well. Lowenfeld and Brittain report that it is difficult to tell where one stage stops and another begins.[xiii] Since the publication of *Creative and Mental Growth,* others have continued to add to and revise the stages to better fit children's visual experiences and cognitive abilities. Robert Clements and Frank Wachowiak, authors of *Emphasis Art – A Qualitative Art Program for Elementary and Middle Schools*, state the stage theory as a descriptive and not a prescriptive devise.[xiv] Thus meaning, these stages are only to be used as a defining aspect of a stage and not as a means of diagnosis for children and where they are cognitively. Clements and Wachowiak think "stages" can stereotype and limit, so they chose to use the terms "artistic development" and "developmental characteristics" instead of "stage". They further break down each "stage" into artistic development and developmental characteristics for each age and grade level.

Kindergarten developmental characteristics include scribbling to shapes, color, the figure and the ground. At this age, presentations may include patterns of strokes and dots, directional lines, simple geometric shapes, unrealistic colors, sometimes a detached body part and a baseline at the bottom of the page. Color is chosen for personal or emotional content. Kindergarteners will exaggerate the size of an important person or objects and their drawings are very simplified representations with little detail.[xvi]

Figure 4: Turtle, flower and Tree[xv]

Grades one and two build on the Kindergarten levels and include shapes, size, color, space, objects and the human figure. Children will slowly change from the use of geometric, symbolic interpretations to characterizations that are more specific. They will draw a sky baseline in addition to a ground baseline and use stereotypical color. They also draw distant objects the same size as closer objects and line them all up on the same baseline. Children, after developing a baseline, will use any of the remaining three edges of the paper for a baseline. They may also turn the paper upside-down and draw an additional baseline or use the paper's edge as a baseline. Children may also produce mix-planes, more than one point of view, in their drawings. Sometimes they will produce an x-ray drawing, showing internal and external views of an object. Example: A drawing of a house will look like a dollhouse without a façade (front wall). First and second grade students' exaggeration of the important persons or objects is not as large at the kindergartener's exaggerations. Six and seven year olds draw objects as they know them and devise their own interpretations of the human figure.[xviii] They will also indicate gender differences by drawing dresses on girls and pants on boys.

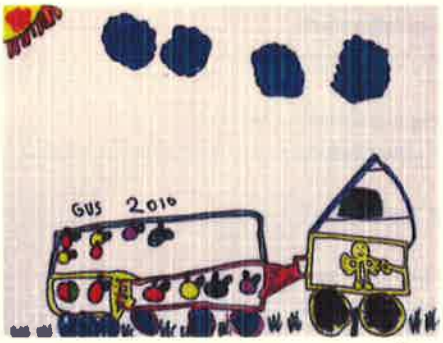


Figure 5: X-Ray drawing with baselines[xvii]

Grades three and four continue to build on the previous level and make advancement in shapes, color, space, objects, and the human figure. At this age, drawings are more composed and planned. This age experiments with mixing their own colors and creating space and depth by using placement and overlapping. Objects for their artworks are chosen based on their design needs rather than realism. The figures show action and are more realistic in proportion.

In grades five and six, Clements and Wachowiak provide some stage related descriptions of children's artistic development. These developmental characteristics include:

- Become increasingly critical of their drawing ability and often are so discouraged with their efforts they lose interest in art class unless they are wisely and sympathetically motivated and guided.
- Develop a growing curiosity to experiment with new and varied materials, tools and techniques.
- Experiment more with value contrast, neutralized colors, patterns and textural effects.
- Begin to use rudimentary perspective principles in drawing landscapes, buildings, streets, train tracks, fences, roads and interiors.
- Drawings and paintings become more focused on the environment around them.

After examining these stages or developmental characteristics, one may see how skills acquired during one level takes the children to the next stage of development; however, these skills may overlap or even be skipped to the next stage or age level.[xix] Internal and external factors may even affect a child's artistic development. Children who are repeatedly exposed to the arts or those who have been read to abundantly may have an impact on the development of the stages. However, in a study by Lynette Fast, "Investigating the Use of Children's Artwork as an Observation Tool in Early Reading Programs," she examines the relationships of children's art and reading levels of primary school students in Grenada, West Indies and Ontario, Canada. She found that reading rankings and art rankings were correlated in the study conducted in Canada. Emergent and early readers from Grenada, who had almost no experience with art materials at home or school, were studied to see if a correlation was found between art stages and hands on experience. The study found that "for the most part, the stage of artistic

development apparent in the pictures was similar to that of children in local schools where materials are used regularly."[xx]

Lowenfeld and Brittain state "developmental stages are not merely developmental stages in art, but are developmental stages in the whole growth pattern and that the art product is merely an indication of this total growth."[xxi] Cognitive growth is also a factor to consider when looking at children's artistic growth in comparison to their growth in reading comprehension. The age old question is, do children draw what they know or draw what they see? Many believe that young children draw what they know, whereas, older children draw what they see. Piaget discovered that these cognitive stages of development seem to correspond with the artistic stages of development. There are four major stages in Piaget's theory that include Sensorimotor Period, Preoperational Period, Concrete Operations, and Formal Operations. A website developed by Honolulu Community College gives definitions of these periods as follows:[xxii]

1. **Sensorimotor:** *(birth to about age 2)*

   During this stage, the child learns about himself and his environment through motor and reflex actions. Thought derives from sensation and movement. The child learns that he is separate from his environment and that aspects of his environment -- his parents or favorite toy -- continue to exist even though they may be outside the reach of his senses. Teaching for a child in this stage should be geared to the sensorimotor system. You can modify behavior by using the senses: a frown, a stern or soothing voice -- all serve as appropriate techniques.

2. **Preoperational:** *(begins about the time the child starts to talk to about age 7)*

   Applying his new knowledge of language, the child begins to use symbols to represent objects. Early in this stage he also personifies objects. He is now better able to think about things and

events that aren't immediately present. Oriented to the present, the child has difficulty conceptualizing time. His thinking is influenced by fantasy -- the way he'd like things to be -- and he assumes that others see situations from his viewpoint. He takes in information and then changes it in his mind to fit his ideas. Teaching must take into account the child's vivid fantasies and undeveloped sense of time. Using neutral words, body outlines and equipment a child can touch gives him an active role in learning.

3. **Concrete:** *(about first grade to early adolescence)*

During this stage, accommodation increases. The child develops an ability to think abstractly and to make rational judgments about concrete or observable phenomena, which in the past he needed to manipulate physically to understand. In teaching this child, giving him the opportunity to ask questions and to explain things back to you allows him to mentally manipulate information.

4. **Formal Operations:** *(adolescence)*

This stage brings cognition to its final form. This person no longer requires concrete objects to make rational judgments. At his point, he is capable of hypothetical and deductive reasoning. Teaching for the adolescent may be wide-ranging because he'll be able to consider many possibilities from several perspectives.[xxiii]

Clements and Wachowiak believe these stages are roughly related to the stages in art education by stating "scribbling and manipulation of materials, learning how to represent things and ideas through art media, and, in middle school, increased intellectual examinations, such as in art criticism, art history, and aesthetics,"[xxiv] thus linking the two. These developmental aspects play a role in all areas of a child's learning process and even how he/she process the things he/she are learning.

Few studies were found that have been conducted in the past on the relationships between artistic development and cognitive development. One of the studies related to this topic was written by Judy A. Hale and is entitled "Determining Relationships between Young Children's Cognitive Stage of Development and Art Stage of Development as They Relate to Literacy."[xxv] In this study, Hale studied fifteen first grade students and the relationships of cognitive stage of development, art stage of development and reading ability. Students either fell into the cognitive stage of preoperational (2 years to 7 years) or concrete operational (7 years to 11 years). The stage in which the student was placed was identified by observational data taken in interviews, artwork and teacher comments. Hale recognized that Piaget's developmental stages and Lowenfeld and Brittain's stages of artistic development coincided with each other. From this, she paralleled the preoperational and concrete operational stages of cognitive development with Lowenfeld and Brittain's pre-schematic and schematic stages of art development. Hale used indicators to determine their stage in art development, however, did not specify or explain what the indicators were or even the means by which they were decided. The term "reading ability" is defined by this study's classroom teachers as the ability of the children to read "chapter books." These readers must be able to read with appropriate expression, read phrases; acknowledge periods, question marks and exclamation marks, read words correctly, self correct errors, and comprehend text. The relationship of literacy development, cognitive development and artistic levels correlated for ten out of fifteen students. Lack of involvement with books, transitions between developmental stages, connection, relationship between the environment and preoperational thinking were all factors in the five non-correlated students. According to this study, correlations do exist between

cognitive stages and artistic stages as well as reading levels however; many of the indicators used in the study were not explained and classroom teacher remarks were not included.[xxvi] Another limitation to Hale's study is the problem of defining the word "reading" itself. Some think the act of identifying letters and sounding them out to make a word is the act of reading. However, reading involves more than just saying words; it includes the comprehension of the text as well. Can students use and evaluate words they read? Do they understand what each individual word means and correctly apply it in their own writing?

Alan G. Richard published an article in *Art Education* in 2003 entitled "Arts and Academic Achievement in Reading: Function and Implications." In this article he states "being literate in the arts affords students a greater advantage in learning to read. From my observation, I suspect that the experiences gained from studying lines, shapes, colors, unity/space and emphasis heighten print awareness and facilitate the comprehension of words and the development of other reading skills."[xxvii] Many authors have similar thoughts on this subject as well. Lines make up symbols or letters, positive and negative shapes are created in words, colors become identifiers of objects in pictures, unity and space give words a relationship instead of just a grouping of letters, and even emphasis as explained in art terms relates to capital letters and punctuation.[xxviii] Students also use visual images as means of writing stories – the more vivid the images is in their head, the more colorful and detailed the story will be, thus linking the aspects of reading comprehension also. Geraldine Schwartz, Founder and President of the Vancouver Learning Center states; "If we develop the building blocks of visual perception, visual spatial organization and visual discrimination by learning to

draw, our brains cannot help but transfer these skills to such tasks as mathematics, which is at its base the organization of objects in space, or to reading and spelling, which require visual attention to detail as well as pattern and organization in space, as the eye sweeps across the line of print and down to the next line."[xxix]

Many of these authors have found links between art development and reading and have proven that they inspire and transfer to one another. This study will examine if artistic development and reading comprehension are correlated between the two stages and how do students who are reading below grade level in reading comprehension compare to students who are reading above grade level in reading comprehension in the area of artistic development?

Methodology

Population:

The subjects for this study will consist of thirty-five third grade students from a rural elementary school in Cleveland County, North Carolina. Fourteen white males, sixteen white females, two African American males, one African American female and two male Hawaiian-Pacific Islanders will be studied. Of these students, seven are in the Academically Intellectually Gifted area of eligibility and six are in the Exceptional Children's Program with their area of eligibility being: four Learning Disabled in Reading, one traumatic brain injury, and one Intellectually Disabled – moderate.

Procedures:

During the study, a portfolio for each student will be developed and will contain artwork created in the art room and STAR Reading Test scores indicating grade level proficiency in reading.[xxx] Each student in the study will participate in the same drawing activities during September, January, and May. During art class, the students will be instructed to make one drawing, using pencil, which will include the following objects: 1) a person or people, 2) a structure or something man-made, and 3) a setting or environment. Students will not be coached on the specifics to draw; they will only be instructed of the three general objects that must be included in their drawing. Once finished, the students will write their name, the date, the classroom teacher's name and the grade level on the back of the paper. The students will

also be instructed to write a complete sentence that describes their drawing on the back of the paper. One forty five minute class will be used to complete the pencil drawing in the art room. Once completed, the art teacher will collect the pictures and file them in student portfolios.

Instruments and Tools:

For this study, the students' grade level artistic development will be determined using two sources, Lowenfeld's *Creative and Mental Growth*[xxxi] and Clements and Wachowiak's *Emphasis Art – A Qualitative Art Program for Elementary and Middle Schools.*[xxxii] The chapters discussing characteristics and indicators of artistic development for grade and age levels will be use to determine the students' levels of artistic development. A survey check sheet, created by the researcher, will be used to determine the artistic development levels. This check sheet will include characteristics and traits written specifically about each level of artistic development. Using a check sheet as their guide, visual art teachers will examine and score the drawings according to the characteristics and indicators of the artistic developmental stages. Seven elementary visual arts teachers from Cleveland County Schools will comprise the team of evaluators to examine and score the artistic part of the study. All three dates from the study will be evaluated; however, they will be independent of each other. The findings will be charted in each student's portfolio.

The reading levels for comprehension will be determined by each student taking the STAR Reading Comprehension test. The scores will be generated by the STAR Reading Program

Computer-Adaptive Test & Database. [xxxiii] Student Instructional Reading Levels (ILR) will be generated by the program and will be charted and included as part of each student portfolio. Reports will be printed and given to the researcher to include in each student's portfolio. Charts will be made each study period to rank the students by reading comprehension levels and artistic levels in order to observe any correlations of the two.

Timeline:

The time line for this study will be over a period of one school year starting in September of 2010 and running through May 2011. The drawing activity will be given in September of the 2010 -2011 school year, in January, and in May to include in each student portfolio. About the same time during the school year, the students will be given a reading comprehension test by their classroom teacher in the computer lab to identify their Instructional Reading Levels.

Analysis of the Data:

Comparisons and correlations will be made using reading levels and art levels. Notes and charts for each student will be made three times during the study (September, January, and May) to track students' progress with reading comprehension and art levels. Once all data has been collected, it will be tabulated and entered into a spreadsheet for further analysis. A spreadsheet will be made for each student in the study, as well as for artistic development and

reading comprehension levels as a total group. Tables and graphs will be made to show the extent of correlation of reading levels as compared to artistic development.

From this study, the outcome will be a correlation between artistic developments and reading comprehension based on the individual student's instructional reading levels.

Results

After examining the characteristics of Lowenfeld & Brittain art stages and artistic developmental characteristics of Clements & Wachowiak, the researcher decided to use Lowenfeld and Brittain's stages to evaluate the students' artworks. Each student's artwork was evaluated in September, January and May using a check sheet based on Lowenfeld and Clements' artistic characteristics. The stages include Pre-schematic, Schematic, Dawning Realism and Pseudo realistic.

The STAR Reading Program (a computerized testing system) was used to rank reading levels of each participant. Three sessions were use to obtain more reliable study results. The participants were tested in September, January and May and ranked on their current Instructional Reading Level (IRL) at the time of each test. Each of the three testing sessions were stand alone and were not compared to or built upon another. The reading levels were interpreted by the first number, which is the grade level, and the month of the grade level on which they were currently ranked, which is the number after the decimal. Example: 3.5 would be read as a third grade reading level during the fifth month. Primer (P) and Preprimer (PP) categories were also included for those scoring below a first grade reading level.

Of the thirty-five third grade students who originally started the study, only thirty-four completed the study. One student moved prior to the study's start date. All students were between the ages of eight and nine with the exception of student #8 who was seven years and eleven months old at the time of the September testing. Seven students were in the Academically Intellectually Gifted area of eligibility and six were in the Exceptional Children's

Program with their area of eligibility: three Learning Disabled in Reading, one Learning Disabled in Reading and Written Expression, one traumatic brain injury, and one Intellectually Disabled.

The September 2010 study included thirty-four total students with reading scores raking between PP and a 6.4 Reading comprehension level. There were four students in the Preprimer area, two students in the Primer area, three students ranking within the first grade reading levels, six students within the second grade reading levels, seven students within the third grade reading levels, nine students within the fourth grade reading levels, two students within the fifth grade reading levels, and one student within the sixth grade reading levels. The September 2010 artistic levels included two in the Pre-schematic stage, eight in the Schematic stage, twenty two in the Dawning Realism stage and two students in the Pseudo realistic stage.

The January 2011 study included thirty-four total students with reading scores ranking between PP and a 6.7 reading comprehension level. There was one student in the Preprimer area, one student in the Primer area, two students ranking within the first grade reading level, seven students within the second grade reading levels, ten students within the third grade reading levels, eight students within the fourth grade reading levels, three students within the fifth grade reading levels, and two students within the sixth grade reading levels. The January 2011 artistic levels included one in the Pre-schematic stage, three in the Schematic stage, twenty eight in the Dawning Realism stage and two in the Pseudo realistic stage.

The May 2011 study included thirty-four total students with reading scores ranking between PP and an 8.4 reading comprehension level. There was one student in the Preprimer area, one student in the Primer area, one student ranking within the first grade reading levels,

four students within the second grade reading levels, eleven students within the third grade reading levels, eleven students within the fourth grade reading levels, two students within the fifth grade reading levels, two students within the sixth grade reading levels and one student in the eighth grade reading level. The May 2011 artistic levels included one in the Pre-schematic stage, four in the Schematic stage, twenty six in the Dawning Realism stage and three in the Pseudo realistic stage.

#	Race	Sex	First	Exceptionalities	September Reading Level	September Lowenfeld Level	January Reading Level	January Lowenfeld Stage	May Reading Level	May Lowenfeld Stage
1	w	m	Isaiah M.		2.8	Schematic	2.9	Pre - Schematic	3.6	Pre - Schematic
2	w	m	Froylan		3.0	Pseudorealistic	4.7	Dawning Realism	4.2	Pseudorealistic
3	w	f	Emily		3.3	Pseudorealistic	3.5	Pseudorealistic	3.5	Pseudorealistic
4	w	f	Keely		3.2	Dawning Realism	3.8	Dawning Realism	4.6	Dawning Realism
5	pi	m	Keegan	AIG	4.3	Dawning Realism	3.4	Dawning Realism	4.8	Dawning Realism
6	w	m	Brackston		2.4	Dawning Realism	3.0	Dawning Realism	3.5	Dawning Realism
7	w	m	Avery		4.3	Dawning Realism	5.3	Dawning Realism	4.9	Dawning Realism
8	w	f	Hannah		3.1	Dawning Realism	2.5	Dawning Realism	3.9	Dawning Realism
9	w	f	Lillian		1.8	Dawning Realism	3.0	Dawning Realism	3.8	Dawning Realism
10	w	m	Eddie Thomas	Tramatic Brain Injury	PP	Dawning Realism	2.0	Dawning Realism	3.3	Dawning Realism
11	w	m	N.	LD – Reading	PP	Schematic	2.2	Schematic	2.2	Schematic
12	w	f	Ivy	LD – Reading	P	Dawning Realism	P	Dawning Realism	P	Dawning Realism
13	w	m	Zach		2.5	Dawning Realism	3.1	Dawning Realism	3.9	Dawning Realism
14	w	f	Montana		4.5	Dawning Realism	4.4	Schematic	5.4	Dawning Realism
15	w	f	Malerie		2.2	Schematic	2.6	Dawning Realism	3.6	Dawning Realism
16	w	m	Parker		5.6	Dawning Realism	5.9	Dawning Realism	5.8	Dawning Realism
17	w	m	David	ID-moderate	PP	Pre-Schematic	PP	Schematic	PP	Schematic
18	w	f	Madison	AIG	4.5	Dawning Realism	4.2	Dawning Realism	4.5	Dawning Realism
19	b	m	Darrin		1.0	Pre-Schematic	2.4	Dawning Realism	2.6	Dawning Realism
20	w	f	Macy	LD – Reading	P	Dawning Realism	1.8	Dawning Realism	2.6	Dawning Realism
21	pi	m	Nick		4.2	Dawning Realism	4.1	Pseudorealistic	3.6	Pseudorealistic
22	w	m	Corey	AIG	6.4	Schematic	6.7	Dawning Realism	6.9	Dawning Realism
23	w	m	Jackson		3.0	Schematic	4.3	Dawning Realism	4.3	Schematic
24	w	m	Justin Thomas	LD – Reading	PP	Schematic	1.9	Dawning Realism	1.7	Dawning Realism
25	w	m	S.	AIG	4.8	Schematic	4.8	Dawning Realism	6.3	Dawning Realism
26	w	f	Madison		4.1	Dawning Realism	3.9	Dawning Realism	4.1	Dawning Realism
27	w	m	Zach	AIG	4.9	Dawning Realism	6.3	Dawning Realism	8.4	Dawning Realism
28	w	f	Anna	AIG	5.7	Dawning Realism	5.9	Dawning Realism	4.8	Dawning Realism
29	w	f	Aleya		2.6	Dawning Realism	3.4	Dawning Realism	4.2	Dawning Realism
30	w	f	Easton		3.1	Dawning Realism	4	Dawning Realism	4.5	Dawning Realism
31	w	f	Graycee		3.1	Dawning Realism	3.2	Dawning Realism	3.1	Dawning Realism
32	w	f	Savannah	AIG	4.1	Dawning Realism	4.7	Dawning Realism	4.6	Dawning Realism
33	b	m	Isaiah P.		2.1	Dawning Realism	3.9	Dawning Realism	3.4	Dawning Realism
34	w	f	Jada		1.1	Schematic	2.1	Dawning Realism	2.2	Schematic

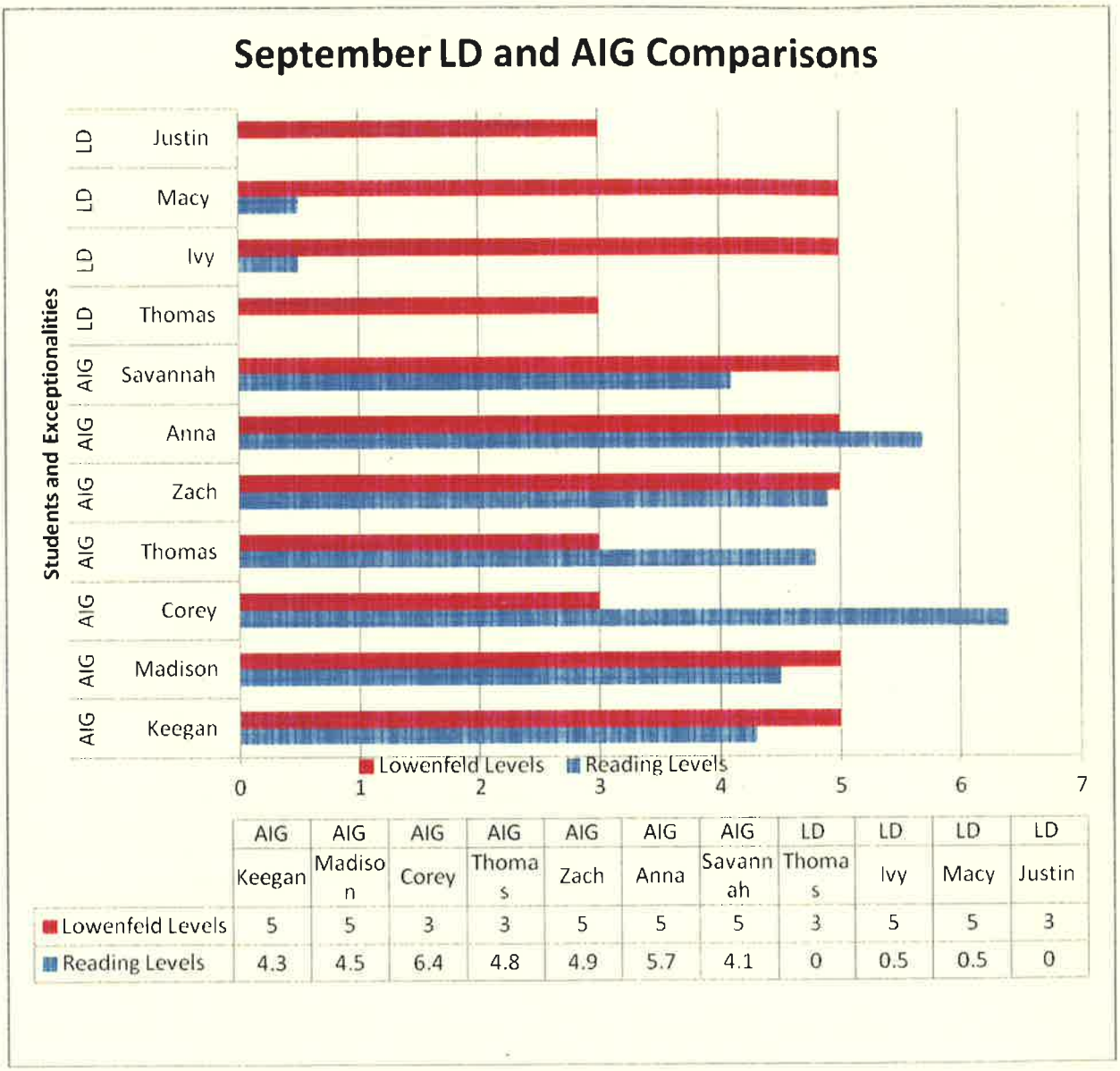
Student comparisons for those reading above or below grade level for September were as follows: Fifteen students were reading below a third grade reading level in September. The artistic levels for this group ranged from two Pre-Schematic, five Schematic, and eight as Dawning Realism. Seven students were reading on a third grade level with one ranked on an artistic level as Schematic, four being Dawning Realism, and two being Pseudo realistic. Twelve students ranked above third grade reading and were ranked artistically as two being Schematic and ten being Dawning Realism.

For the January testing session, eleven students ranked reading below a third grade reading level for comprehension. Their artistic rankings were one as Pre-Schematic, two Schematic, and eight as Dawning Realism. Ten students were ranked reading on a third grade reading comprehension level with their artistic levels being nine as Dawning Realism, and one as Pseudo realistic. Thirteen students were reading above a third grade reading comprehension level in January. Those students ranked artistically as one Schematic, eleven as Dawning Realism, and one as Pseudo realistic.

In the May testing sessions, seven students were reading below a third grade reading comprehension level. Of these students, three were ranked on an artistic level of Schematic and four were ranked as Dawning Realism. Eleven of the thirty-four tested students ranked on a reading comprehension level of third grade. One of these students was ranked artistically as Pre-Schematic, eight were ranked as Dawning Realism and two were ranked as Pseudo realistic. There were sixteen total students reading above a third grade reading comprehension level in

May. Their artistic levels were one Schematic, fourteen as Dawning Realism, and one as Pseudo realistic.

Of the thirty-four students who were studied, six of these students were in the Exceptional Children's program. Four were in the area of eligibility of Learning Disabled (LD) in reading, one in the area of Traumatic Brain Injury (TBI) and one in the area of Intellectually Disabled (ID) Moderate. Seven of the thirty four students in the study were Academically Intellectually Gifted (AIG). The scores of the AIG and LD students were broken into the three testing sessions and were compared as follows:



	AIG Keegan	AIG Madison	AIG Corey	AIG Thomas	AIG Zach	AIG Anna	AIG Savannah	LD Thomas	LD Ivy	LD Macy	LD Justin
Lowenfeld Levels	5	5	3	3	5	5	5	3	5	5	3
Reading Levels	4.3	4.5	6.4	4.8	4.9	5.7	4.1	0	0.5	0.5	0

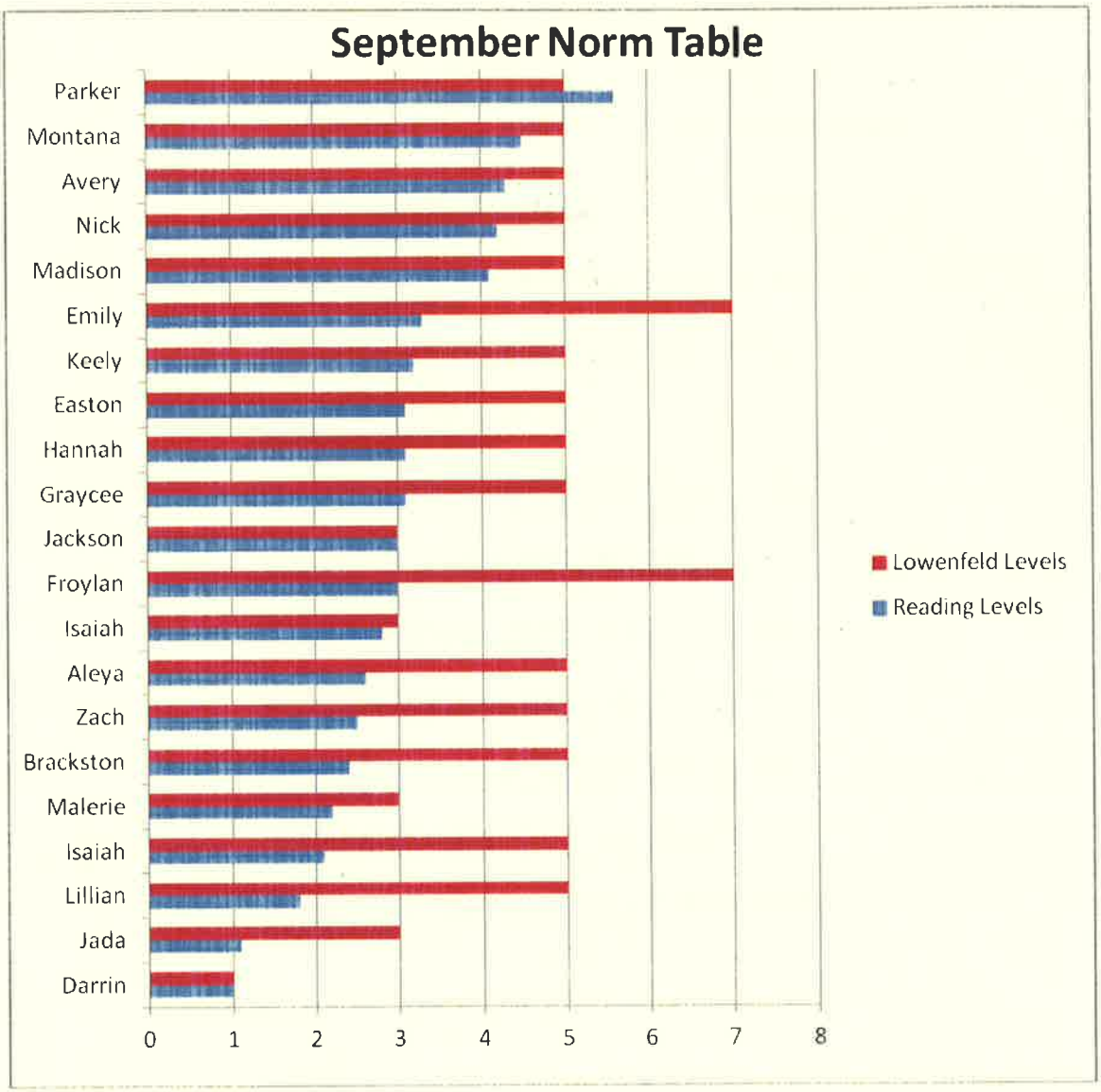
Notes for all tables –

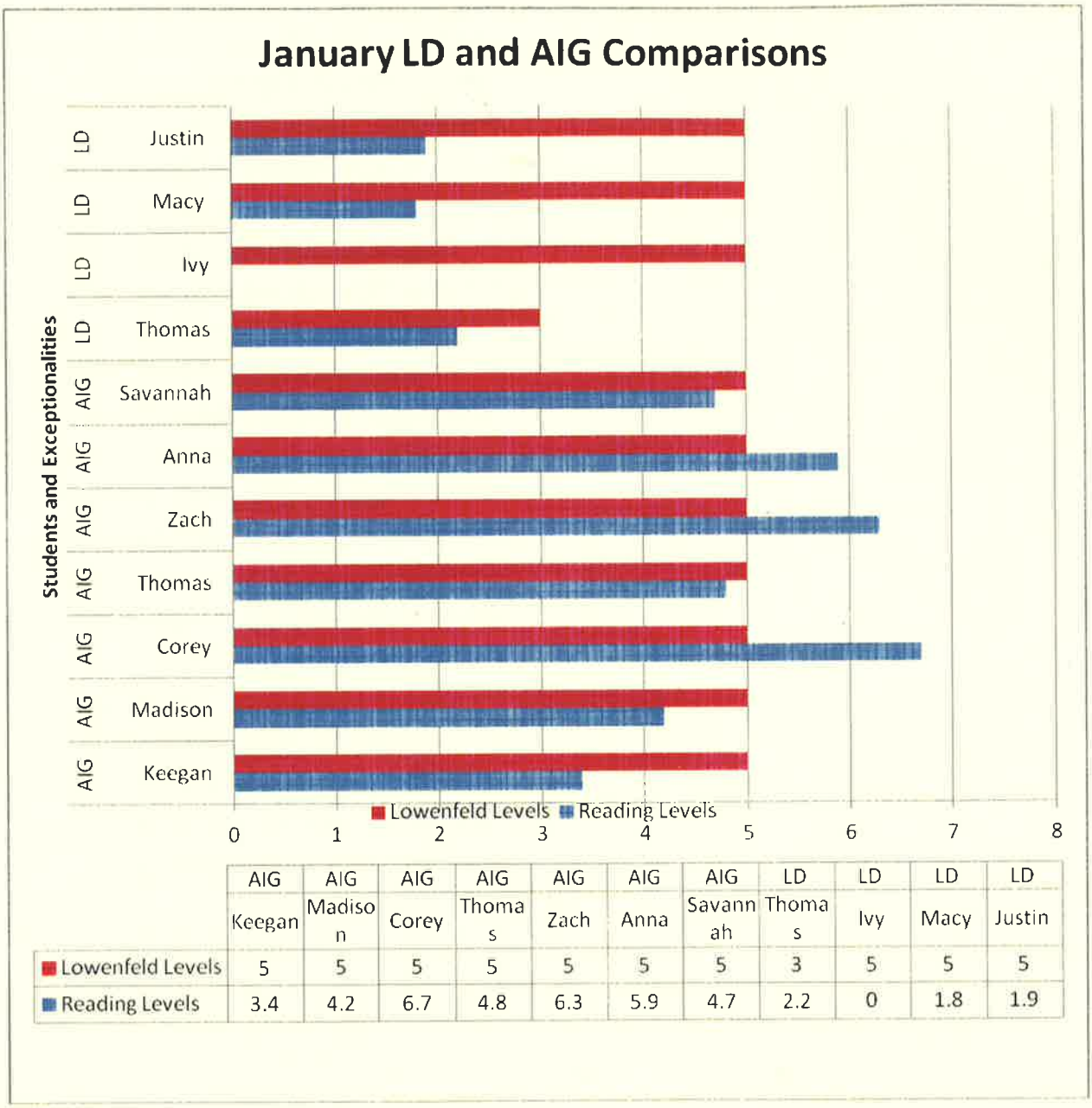
Reading levels had to be adjusted to show numerical values. They are as follows:

Pre-Primer (PP) = 0 and Primer (P) =0.5

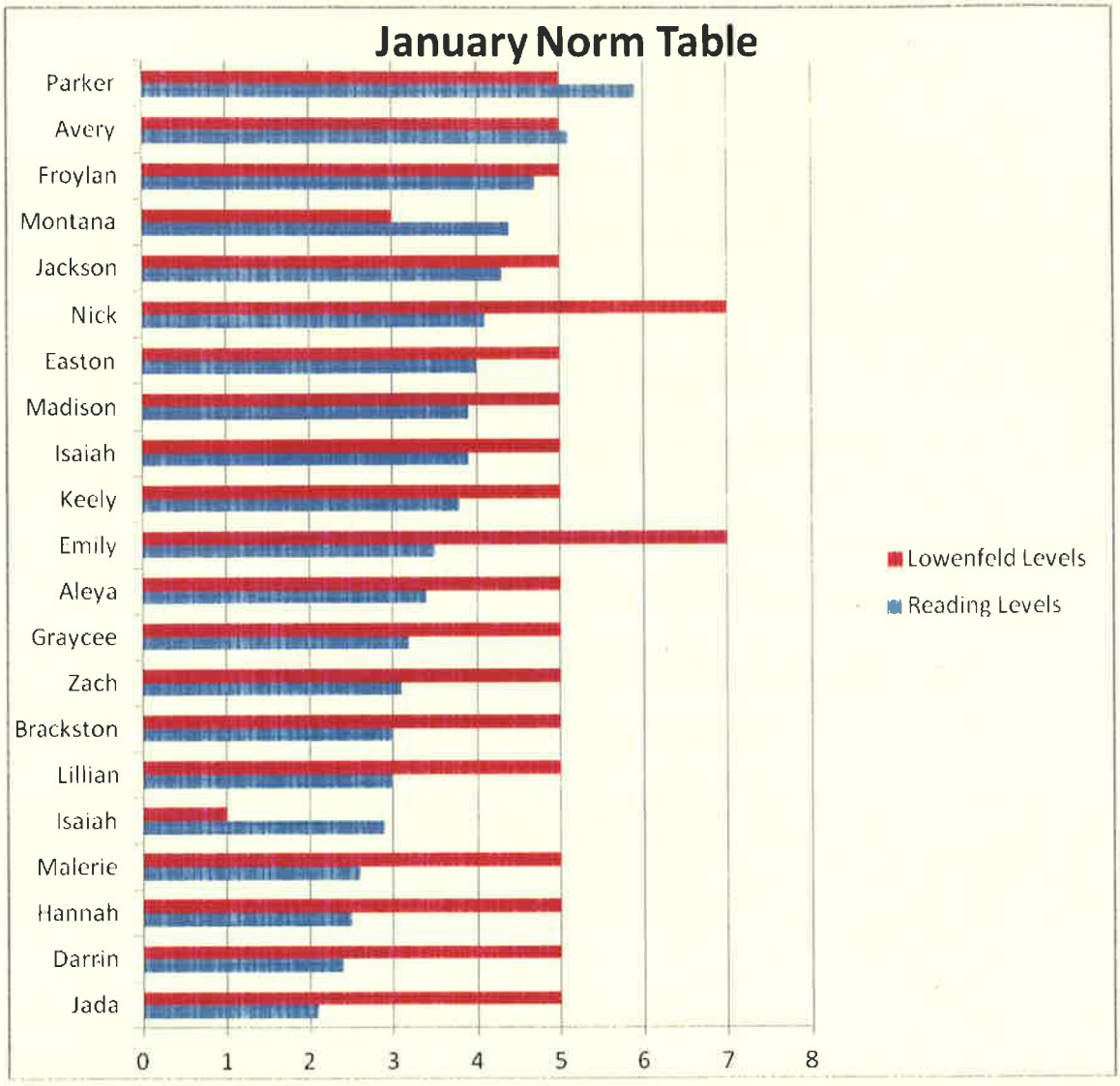
Lowenfeld labels had to be adjusted to show numerical values. They are as follows:

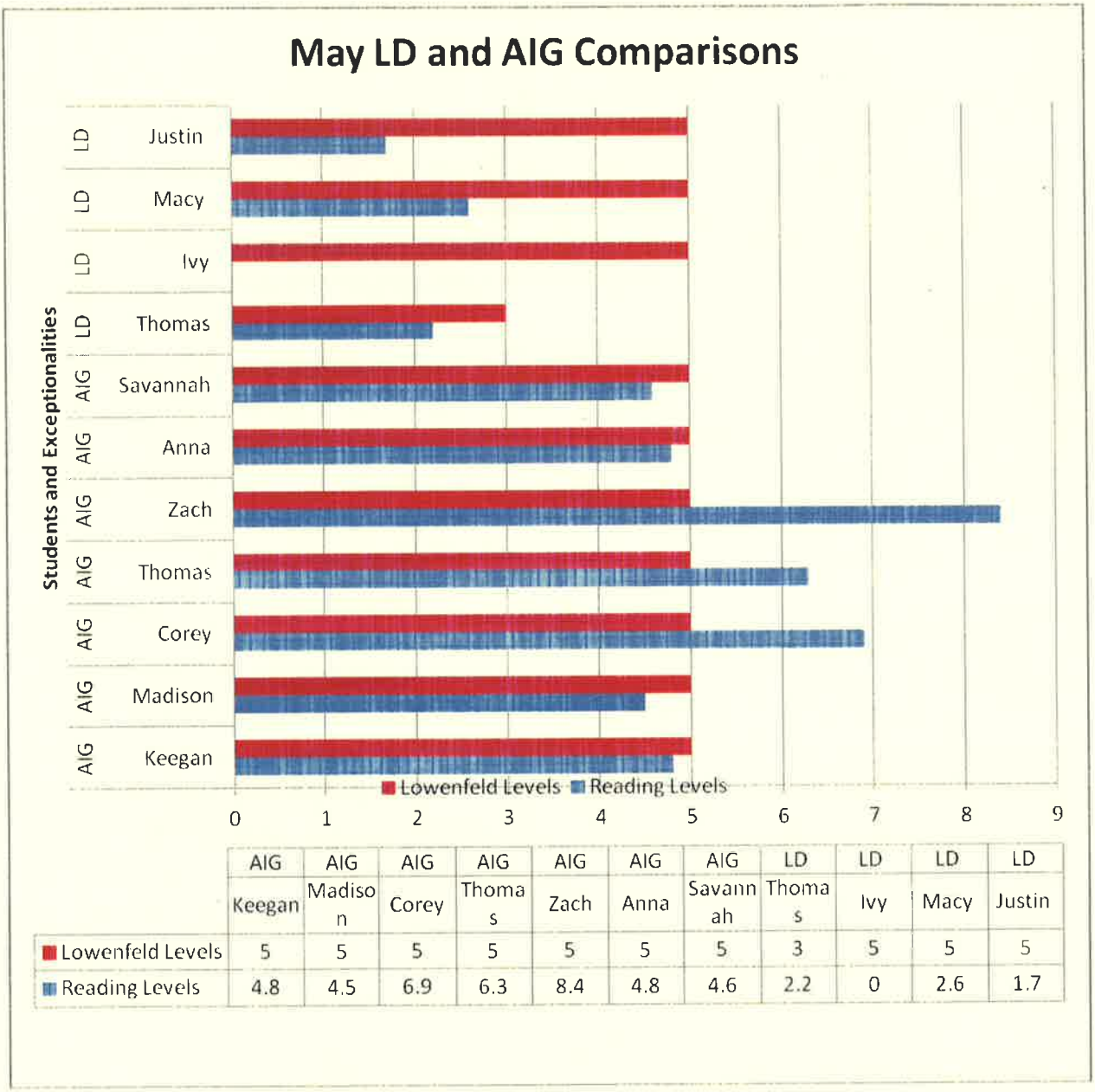
Pre-Schematic = 1, Schematic = 3, Dawning Realism = 5, and Pseudo Realistic = 7


September Norm Table
Parker
Montana
Avery
Nick
Madison
Emily
Keely
Easton
Hannah
Graycee
Jackson
Froylan
Isaiah
Aleya
Zach
Brackston
Malerie
Isaiah
Lillian
Jada
Darrin
0
1
2
3
4
5
6
7
8
Lowenfeld Levels
Reading Levels

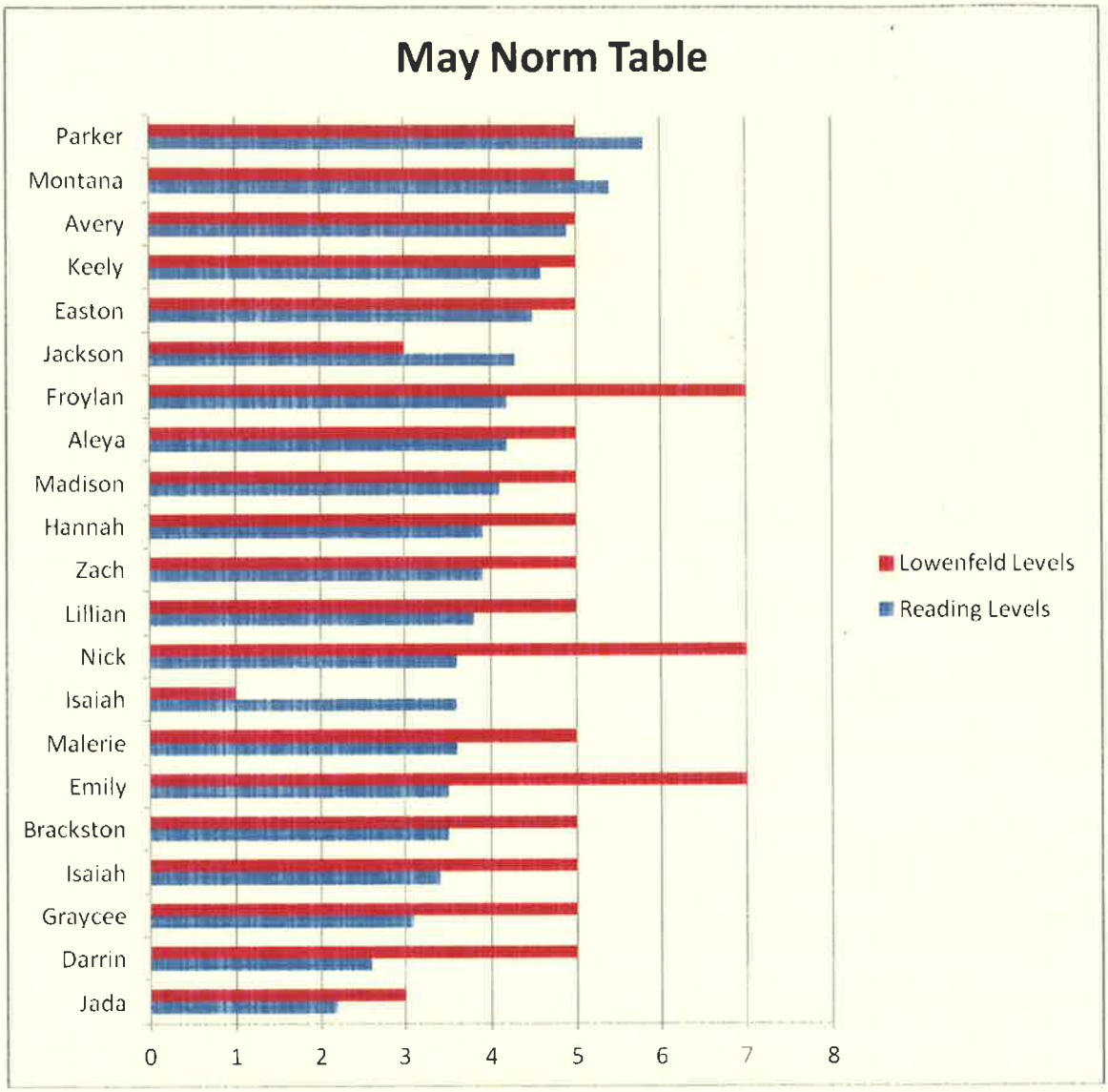


	AIG Keegan	AIG Madison	AIG Corey	AIG Thomas	AIG Zach	AIG Anna	AIG Savannah	LD Thomas	LD Ivy	LD Macy	LD Justin
Lowenfeld Levels	5	5	5	5	5	5	5	3	5	5	5
Reading Levels	3.4	4.2	6.7	4.8	6.3	5.9	4.7	2.2	0	1.8	1.9


January Norm Table
Parker
Avery
Froylan
Montana
Jackson
Nick
Easton
Madison
Isaiah
Keely
Emily
Aleya
Graycee
Zach
Brackston
Lillian
Isaiah
Malerie
Hannah
Darrin
Jada
0
1
2
3
4
5
6
7
8
Lowenfeld Levels
Reading Levels



	AIG Keegan	AIG Madison	AIG Corey	AIG Thomas	AIG Zach	AIG Anna	AIG Savannah	LD Thomas	LD Ivy	LD Macy	LD Justin
Lowenfeld Levels	5	5	5	5	5	5	5	3	5	5	5
Reading Levels	4.8	4.5	6.9	6.3	8.4	4.8	4.6	2.2	0	2.6	1.7


May Norm Table
Parker
Montana
Avery
Keely
Easton
Jackson
Froylan
Aleya
Madison
Hannah
Zach
Lillian
Nick
Isaiah
Malerie
Emily
Brackston
Isaiah
Graycee
Darrin
Jada
0
1
2
3
4
5
6
7
8
Lowenfeld Levels
Reading Levels

Discussion

What, if any, is the correlation between reading comprehension levels and artistic development in third grade students? To what extent, if any, are students, who are reading below grade level, artistic development compared to their peer's levels who are reading on or above grade level?

Art ability, as well as reading comprehension, is not fully controlled by age levels, grade levels, exceptionalities, time devoted to the topics or even teaching habits but are comprised of a combination of all of these and the individual student's general characteristics. This study has proved no correlation between the two areas in every student but did show some student levels correlated some of the time. Each of the three studies fluctuated in both reading comprehension and art levels for several of the students.

The September study showed correlation in reading comprehension and exceptionalities as all EC students were reading below grade level, either on a Primer or Pre-Primer level while all of the AIG students were reading above grade level, between the 4.1 level and the 6.4 level. However, many of their artistic levels did not correlate with the reading comprehension levels. David, the ID-moderate student, did show correlation as his reading level was at a Pre-Primer level while his art level was at a Pre-Schematic level. Thomas N. and Justin, LD in Reading, were both reading on a Pre-Primer level but on a Schematic level in art. Eddie, with the TBI area of eligibility, is also on a Pre-Primer level showed his art ability on the Dawning Realism level. Macy and Ivy, both LD in Reading and on a Primer level, had a Schematic level in art. In the AIG exceptionalities, all of the students were above grade level in reading comprehension, between

4.1 and 6.4, and were in the Dawning Realism stage except for two students. Those students were Thomas S., a 4.8 level in reading, and Corey, a 6.4 in reading but both only on a Schematic level in art and showing no correlation between the two levels. Personal observations of both Corey and Thomas S. show they are very tedious workers and strive for perfection. On further examination of their artwork, I noted that each of these two did not fully complete their drawings which may have led to a higher level when complete or possible inconsistencies in the art level judgments. The twenty-one other students read between a 1.0 reading comprehension level and a 5.6 level with their artistic levels ranging from Pre-Schematic to Pseudo realistic. The Pre-Schematic student was Darrin, who was reading on a 1.0 level, and the two Pseudo realistic students were Emily, 3.3 in reading, and Froylan, 3.0 in reading. Based on past experience with both Emily and Froylan, they have always shown great artistic abilities in their artwork. Both are very detailed in their artwork and spend a great deal of time at school and at home improving their artistic skills.

The January study showed of the eleven students reading below a third grade reading comprehension level, six of these were EC students ranging from Pre-Primer to a 2.2 level. David, ID-moderate, continued to be on a Pre-Primer level in reading but did advance his art level to Schematic. Ivy stayed the same in both areas – Primer in reading and Dawning Realism in art. Thomas N. stayed the same on the Schematic level in art but advanced from a Pre-Primer level in reading to a 2.2 level. Eddie advanced to a 2.0 in reading and stayed on Dawning Realism in art. Justin and Macy both scored on a Dawning Realism level in art and both advancing in reading comprehension to Justin being on a 1.9 level in reading and Macy on a 1.8

in reading. All AIG students were on the Dawning Realism level in art, however, one student Keegan, went down from reading above grade level comprehension to reading at a 3.4 reading comprehension level. The remainder of the students, those not having exceptionalities, ranged from a reading comprehension level of 2.1 to 5.9 and an artistic level of Pre-Schematic to Pseudo realistic. Jada, the Pre-Schematic student, was on a 2.9 level in reading comprehension. The two Pseudo realistic students were Nick and Emily, with Nick being on a 4.1 level in reading comprehension and Emily being on a 3.5 level in reading comprehension. Thus again, showing no positive correlation between the reading comprehension levels and artistic levels. Even though reading levels and artistic levels advanced in some students, their levels do not match for the categories in which they were placed.

In the May study, five of the six EC students were still below grade level in reading comprehension. David, ID-moderate, was Pre-Primer in reading comprehension and Schematic in art. Ivy, LD in reading, was on a Primer level in reading and a Dawning Realism in art. Justin, LD in reading, 1.7 in reading comprehension and Dawning Realism in art. Thomas N., LD in reading, scored on a 2.2 level in reading comprehension and a Schematic level in art. Macy, LD in reading, was on a 2.6 level in reading comprehension and a Dawning Realism stage in art. Eddie, the TBI student, scored on a 3.3 level in reading comprehension and a Dawning Realism level in art. All seven AIG students were reading above a third grade reading comprehension level, with scores ranging from 4.5 to 8.4, and all seven were on the Dawning Realism level in art. The students without exceptionalities scored between the 2.2 and 5.8 levels in reading comprehension and the Pre-schematic to Pseudo realistic level in art. The student on the Pre-

Schematic level in art was Isaiah M. and he scored on 3.6 level in reading comprehension. The three students on the Pseudo realistic level included; Emily, 3.5 in reading comprehension; Nick, 3.6 in reading comprehension; and Froylan, 4.2 in reading comprehension. This study again shows that no positive correlation has been made between reading comprehension levels and artistic levels. It also proves there is no correlation between students reading below grade level reading comprehension and those reading above grade level reading comprehension and their artistic levels. Some of the EC students were on the same art level of the AIG students, however, they were reading well below their grade levels. Some of the students without exceptionalities were on a higher artistic level and/or reading level than those with exceptionalities. Of the students who were on the Pseudo realistic level, none of those were AIG students and were reading on grade level with the exception on two who were reading on a 4.2 level and a 4.1 level, just one grade above grade level.

Conclusion

What factors influence student's reading comprehension or student's artistic levels? Can these two areas be paralleled with each other to enhance student's abilities? This study has proven there is no direct correlation between the areas of reading comprehension and artistic levels. Reading comprehension levels and artistic levels fluctuated in the students from study to study. Even though some students were reading above grade level, they did not score above their age category for artistic levels. Also, some of the students who were reading below grade level scored on a higher artistic level than their peers. There were some correlations in some students but as a whole group no positive correlation was found. The results could have proven different if a larger group of students were used in the study.

Art, as well as reading comprehension, is and can be influenced by many factors that help to enhance individual student's abilities and advance them further at a faster rate. Exposure to arts and reading, a variety of mediums or types of literature, different artists and authors viewpoints, time allotted for each area, and even positive support from parents and teachers can all have influence on how a student learns and develops with his or her talents and abilities. Some students may have more support and practice in one subject and excel faster in it than in other subjects.

This study does have factors that can be use to enhance student reading ability in the lower level readers. Teachers can pull from their artistic talents as a means of helping them to decode words and even use picture books to help with comprehension. There is no standard

for every student in every subject – all students will develop at their own rate at the time they are cognitively ready.

[i] Viktor Lowenfeld and W. Lambert Brittain, *Creative and Mental Growth*, 8th Edition (New York:Macmillan, 1987).

[ii] ibid.

[iii] North Carolina Department of Public Instruction. "Visual Arts K-2". North Carolina Department of Public Instruction. http://www.dpi.state.nc.us/curriculum/artsed/scos/visualarts/visualk-2. (Accessed November 20, 2009).

[iv] Mona Brooks, *Drawing with Children*. (Los Angeles:Jeremy P. Tarcher, Inc., 1986).

[v] Ibid.

[vi] STAR Reading - Computer-Adaptive Reading Test and Database. (Wisconsin Rapids:Advantage Learning Systems,INC., 1999).

[vii] Viktor Lowenfeld and W. Lambert Brittain. Creative and Mental Growth, Eighth Edition (New Jersey: Prentice-Hall, Inc., 1987).

[viii] Jim Brutger. "Lowenfeld's Stages of Artistic Development." University of Minnesota. http://www.d.umn.edu/~jbrutger/Lowenf.html (accessed September 16, 2009)

[ix] Willis, Summie. "Circular Scribble," 2009.

[x] Willis, Gus. "Reindeer," pencil, 2008.

[xi] Student artwork. "Tree, Boy and Flower," 2010.

[xii] Brutger. "Lowenfeld's Stages of Artistic Development."

[xiii] [xiii] Viktor Lowenfeld and W. Lambert Brittain. Creative and Mental Growth, Eighth Edition (New Jersey: Prentice-Hall, Inc., 1987). 37.

[xiv] Robert D. Clements and Frank Wachowiak. *Emphasis Art – A Qualitative Art Program for Elementary and Middle Schools*, Ninth Edition (New York: Allyn & Bacon, 2010).

[xv] Willis, Summie. "Turtle, Flower and Tree," 2010.

[xvi] Clements and Wachowiak. *Emphasis Art – A Qualitative Art Program for Elementary and Middle Schools*.

[xvii] Willis, Gus. "Poppaw and an apple wagon," 2010.

[xviii] Clements and Wachowiak. *Emphasis Art – A Qualitative Art Program for Elementary and Middle Schools*.

[xix] ibid, 178.

[xx] Lynette Fast, "Investigating the use of Children's artwork as an Observation Tool in Early Reading Programs," *Visual Arts Research* 26, (2000): 1-12.

[xxi] Lowenfeld and Brittain. *Creative and Mental Growth*. 47.

[xxii] Honolulu Community College. "Piaget's Cognitive Stages", http://honolulu.hawaii.edu/intranet/committees/FacDevCom/guidebk/teachtip/piaget.htm (accessed November 11, 2009).

[xxiii] Ibid.

[xxiv] Clements and Wachowiak. *Emphasis Art – A Qualitative Art Program for Elementary and Middle Schools*.

[xxv] Judy A. Hale, "Determing Relationships Between Young Children's Cognitive Stage of Development and Art Stage of Development as they Relate to Literacy" (annual meeting, The Southern Early Childhood Association, Little Rock Arkansas, March, 11-16, 1996, ERIC Ed 394938).

[xxvi] Ibid.

[xxvii] Allan G. Richards, "Arts and Academic Achievement in Reading Functions and Implications" *Art Education* 56, no.6 (2003): 19-23.

[xxviii] Ibid.

[xxix] Mona Brooks, *Drawing with Children* (Los Angeles: Jeremy P. Tarcher, INC., 1986).

[xxx] Ibid.

[xxxi] Viktor Lowenfeld and W. Lambert Brittain. Creative and Mental Growth, Eighth Edition (New Jersey: Prentice-Hall, Inc., 1987).

[xxxii] Robert D. Clements and Frank Wachowiak. *Emphasis Art – A Qualitative Art Program for Elementary and Middle Schools*, Ninth Edition (New York: Allyn & Bacon, 2010).

[xxxiii] Star Reading - Computer-Adaptive Reading Test and Database.