تأثير قراءة القصص
على مفاهيم الكتابة المطبوعة في رياض الأطفال

عبير عبد الله الهولي*

الملخص
تختلف خبرات الأطفال الخاصة بتعلم القراءة والكتابة باختلاف الأطفال أنفسهم،
لذا هدفت هذه الدراسة إلى التعرف على أثر استخدام القصة وكتب الأطفال على إبراك
أطفال مرحلة الرياضة المطبوعة.

وقد تم تصميم الدراسة لتحديد ما إذا كان تدريس الأطفال لمفاهيم المادة
المطبوعة من خلال قراءة القصة يؤثر على إدراكهم للمفاهيم الأساسية للقراءة والكتابة;
كما هدفت الدراسة إلى تقصي علاقة ذلك ببعض المتغيرات كالجنس والعمر.

ولتحقيق أهداف الدراسة تم استخدام التصميم التجريبي على (60) طفلاً في
رياض الأطفال، واستخدم طرق إحصائية تشمل على
Levin's test, Two-way ANOVA T-Test

وقد اتفقت النتائج مع الدراسات السابقة، حيث تبين وجود ميل كبير نحو توظيف
قراءة كتب وقصص الأطفال لزيادة الحصيلة اللغوية، وكذلك الوعي بالمادة المطبوعة
كأساس لتعلم القراءة والكتابة عند أطفال مرحلة الرياض، بالإضافة إلى اتفاق نتائج
الدراسة الحالية مع الدراسات السابقة على أن التعليم الرسمي للقراءة والكتابة يزيد من
مستوى الخوف لدى الأطفال، مما يجعلهم يحترمون معلوماتهم عن اللغة بصورة عامة
واللغة المطبوعة بصورة خاصة. وتظل الحاجة قائمة لمزيد من البحث، بما تكون هناك
نتائج مختلفة إذا تم تكرار الاختبار على عينة أكبر.

* أستاذ مساعد بقسم المناهج وطرق التدريس - كلية التربية الأساسية - الكويت.
THE EFFECT OF STORYBOOK-READING ON KINDERGARTNER’S CONCEPTS ABOUT PRINT*

ABEER AL-HOOLI**

Abstract
Children’s experiences with literacy awareness are almost as varied as children themselves.

This present study used experimental design to examine the effects of storybook reading on kindergartners’ concepts about print and printed word. The study was designed to determine whether formal instruction about language concepts in conjunction with storybook-reading influences children’s awareness of reading concepts. It was also assumed that the gender or age of the child makes a significant difference in the print-recognition achievement.

The data of (60) cases were analyzed through appropriate descriptive statistics including two-way analysis of variance, Levine’s test, and Independent-sample T-Test.

The review of the literature showed that there is a strong trend towards employing storybook-reading to increase children’s vocabulary, awareness of print, comprehension skills, and increasing their interest in the world around them. However, some studies claimed that formal reading instruction intimidates children, making them question their knowledge.

The result of this study endorsed the literature; there was no significant difference between the results of the control group and the

*This study is sponsored by Public Authority for Applied Education and Training
**Associate Professor at the Curriculum & Instruction Dept. Basic College of Education, PAAET, Kuwait.
experimental group to the positive. Finally, further investigation is needed. One might find different results if the test is repeated with larger sample size.

Introduction

Contemporary researchers tend to view kindergarten as the place where children from ages five to six years old continue to develop a formal sense of language, expand their curiosity toward learning, and explore their environment (Nielson, Klesius, & Griffith, 2002; Elsea, 2001; Renz, 2000; Morrow, 1985). According to McGee & Morrow (2005) while educators having debates over what is and is not appropriate for young children, the research is clear: "Young children can and do learn a great deal about reading and writing at age five. Kindergarten instructional approaches remain playful; but nonetheless, they are systematic and intentional" (p. 1).

Wilkie (1998) considered learning to read, a process rather than a product of the mental readiness of the child to acquire the skill of reading. This process required the reader not only to decoding the symbols lined up across the pages but also gaining the meaning from them to meet constant success.

Learning to read and appreciate reading is a journey that continues throughout the child's education and life (Hawley, 2001). Many cognitive psychologists define reading as a mental process that encourages thinking by means of a response to abstract visual signals. However, Lapp and Flood (1987) define reading as a comprehension of the concepts conveyed by printed work(s), where as Seafoess and Readence (1989) view reading as a communication tool. Recently, there has been discussion in the research community about learning to read as a process rather than the product of the mental readiness of the child to acquire the skill of reading (Berk, 1997).
Glazer and Seafoss (1988) describe reading as receiving ideas, experiences, feelings, emotions, concepts, and activities that permits one to gain vast knowledge. When reading, we can live and travel vicariously and become acquainted with people and events of the past that have shaped our world. "Reading creates for us mental maps of events so that ideas can be transmitted from the mind of one, to the mind of another" (p.2).

"Reading and writing are learned through active use. Young children are not interested in learning about literacy; they are interested in doing it" (Strickland & Morrow, 1988, p.3). As adults, we read books, journals, newspaper, etc., for information and for enjoyment. However, practicing the skills of reading and acquiring information is not the goal for children when they begin to read. They simply know that reading is either a painful or an enjoyment thing to do. Children's positive response to reading depends upon their parents and teachers making reading a pleasant, satisfying experience. Therefore, the materials for exposing and teaching children, the skills of reading, should be interesting and meaningful for them, enabling them to comprehend the information as well as the structure. According to Oliver (1976) "when we show the beginner that there are interesting things in books by sharing them with him, we are helping him to learn to enjoy the activity called reading, even if we are doing the work" (p.60).

In recent years a significant and growing body of research concluded that reading aloud to children is crucial activity for constructing the knowledge required for ultimate success in reading, accumulate more background information, and develop more interest in learning (Lesiak, 1997; Trelease, 1989; Trelease, 1985; Bower, 1976). The use of storybook reading in the classroom has received increasing attention and recognition from educators in all disciplines, from science to reading, from math to language arts. Teachers can use
children's literature as a tool for introducing and assessing science topics for young children (Mayer, 1995; Williams & Spann, 1993). Storybook and all kind of children's literature have also been lauded by the language arts field for encouraging children's appreciation, understanding, and practice of their language. In the kindergarten classrooms, there is a strong trend towards employing storybook-reading to increase: children’s vocabulary, awareness of print, comprehension skills, and increasing their interest in the world around them. The following points can support this trend.

1. Children's books has a story line, children may find it easier to follow the ideas that are part of a plot than to comprehend facts as presented in a textbook or formal instruction (Butzow & Butzow, 1998).

2. Studies showed that reading and writing should function as an integral part of every day's activities, rather than as separate instructional components because young children are not interested in learning about literacy, they are interested in doing it (Nielson, Klesius, & Griffith, 2002; Strickland & Morrow, 2000; Reutzel, Ode, & Moore, 1989; Peter, 1993).

3. Studies also emphasized the interaction between child, adult, and text during storybook-reading in the context of sharing experiences and ideas to help children learn the language in a meaningful setting (Robbins & Ehri, 1994; Morrow & Smith, 1990).

What children need to learn about print? Lesiak (1997) answered "Young children must gradually come to understand the conversations of print that authors follow to develop print awareness / concepts of print" (p.148). Studies revealed that print recognition is correlated with reading achievement, (McGee & Morrow, 2005; Reutzel, Ode, & Moore, 1989), that represent in meaningful text such as the use of storybook and literature and rich print environment (McGee & Morrow, 2005; Box & Aldridge, 1993; Dunkin, 1975).
Dunkin (1975) claimed that lessons don't assist children develop print awareness; rather it is a "product of many experiences with meaningful text spread out over time" (p.82).

After studying children's concepts about print, Clay (1993) concludes that exposing children to increasing experiences with storybook-reading assist them match speech and print to construct awareness of word boundaries in scaffolding manner where teacher guides and supports the child's learning by building upon prior knowledge.

**Problem Statement**

The study is done to examine the effects of storybook reading on kindergartners' concepts about print and printed word. The study is designed to determine whether formal instruction about language concepts in conjunction with storybook-reading influences children's awareness of reading concepts. Using a Two-way Analysis of Variance (ANOVA), the main effects of various variables as well as the interaction effect of various pairs of variables is studied. Presently, only a few studies focus on teaching and learning in kindergarten classrooms. According to Simpson and Oliver (1990), “research results are replete with evidence that early childhood experiences serve as a major influences on academic interests and achievements” (p.4). However, according to Saracho (1993), research related to early childhood education has not grown up compared with other fields.

**The Questions guided this Study are**

What is the effect of storybook-reading on kindergarten on kindergarteners’ concepts about print and printed word?

1. Does storybook-reading combined with formal instruction about language concepts influence children's awareness of reading concepts?
(2) Is there any significant difference between kindergartner's age (5 & 6 years in the print-recognition achievement?

(3) Is there any significant difference between kindergartners' gender (Female & male) in the print-recognition achievement?

(4) Is there a significant interaction effect on the print-recognition achievement with respect to gender (male, female) and the group (control group, experimental group)?

(5) Is there a significant interaction effect on the print-recognition achievement with respect to age (5 & 6) years old and the group (control group, experiential group)?

Research Hypothesis

It is hypothesized that storybook reading combining illustrations with language elements in conjunction with emphasis on instruction about language concepts will facilitate print-recognition achievement

It is also assumed that the gender of the child or the age of the child (from 5 years to 6 years old) makes a significant difference in the print-recognition achievement and there is a significant interaction effect on the print-recognition achievement with respect to gender (male, female) and the group (control group, experimental group) or age (5 years, 6 years) and the group (control group, experimental group). The following research hypotheses are tested:

• First Main Effect for Age: Do the population means on the dependent variable, “Difference of student’s score of Post-test minus Pre-test” differ across levels of the first factor, “CON_EXP
(control group, experimental group)” averaging across levels of the second factor, “Age (5, 6)”?

- **Second Main Effect for Age**: Do the population means on the dependent variable, “Difference of student’s score of Post-test minus Pre-test” differ across levels of the second factor, “Age(5, 6)” averaging across levels of the first factor, “CON_EXP (control group, experimental group)”?

- **Interaction Effects for Age**: Do the difference in the population means on the dependent variable, “Difference of student’s score of Post-test minus Pre-test” among the levels of the first factor, “CON_EXP (control group, experimental group)” vary as a function of the levels of the second factor, “Age (5, 6)”?

- **First Main Effect for Gender**: Do the population means on the dependent variable, “Difference of student’s score of Post-test minus Pre-test” differ across levels of the first factor, “CON_EXP (control group, experimental group)” averaging across levels of the second factor, “Gender (male, female)”?

- **Second Main Effect for Gender**: Do the population means on the dependent variable, “Difference of student’s score of Post-test minus Pre-test” differ across levels of the second factor, “Gender (male, female)” averaging across levels of the first factor, “CON_EXP (control group, experimental group)”?

- **Interaction Effects for Gender**: Do the difference in the population means on the dependent variable, “Difference of student’s score of Post-test minus Pre-test” among the levels of the first factor, “CON_EXP (control group, experimental group)” vary as a function of the levels of the second factor, “Gender (male, female)”?
Purpose of Study

The major purpose of study is to measure the benefits of learning language elements through storybook-reading and traditional teaching of language structure, compared to storybook-reading that does not include teaching about language instruction. The study measures the main effect of gender, age & CON_EXP (control group, experimental group) averaging across the levels of other variables and also the interaction effect of CON_EXP (control group, experimental group) with respect to gender (male, female) as well as with respect to age of the child (5 years, 6 years) in measuring the benefits of learning language.

Review of the Literature

Young children learn language as they experience social interaction. Reading is a language-based skill (Kamhi & Catts, 1999). It requires a process that involves five critical components of reading, these are: 1) Concepts about print involves demonstrating understanding of print concepts; 2) Phonemic awareness deals with the spoken sound; 3) Phonics stands for decoding words, using knowledge of phonics, syllabication, and word parts; 4) Vocabulary acquisition; 5) Ability to read easily and fluently; and 6) Comprehension strategies. For early experience with print, Pehnaken (2003) stresses the relation among language, literacy, and symbolic systems. "Thus, understanding that a word corresponds to a print symbol may be as important a precursor to reading as being able to segment an orally presented word into phonemes" (Behnken, 2003, p.17).

Poor reader experiences evolve from poor experience with books, according to Anderson, Hiebert, Scott, and Wilkenson (1984) "the single most important activity for building the knowledge required for eventual success in reading is, reading aloud to children"
(p.23) as presenting in an interactive storybook sitting that involves the child, the reader, and a meaningful text (Morrow & Smith, 1990). Storybook reading has been correlated to a variety of reading aspects, including children's eagerness to read, children becoming literate before formal schooling, children's success in beginning reading in school, and children's emergent literacy development which cannot be developed without a meaningful print (McCathren, 2003). The kindergarten teacher should read to children load at least once a day and that should read with expression and engaging children in workshop discussion about the story content (Franzese, 2002).

Robbins and Ehri (1994) conducted a study to determine the effect of reading storybooks to kindergarten on their vocabulary acquisition. Fifty-one native English-speaking kindergarteners randomly selected from several classrooms in a middle-to lower-middle-class public elementary school. All children were nonreaders to ensure that any gains in vocabulary knowledge could be attributed to the experience of hearing the words in a story called The Boy Who Cried Wolf, by Freya Littledale and A Crocodile's Tale, by Jose Arurgo and Ariane Aruego Dewey, not to seeing the words in print, additionally, children were shown the original texts and were asked if they had ever heard the stories and if they could repeat the story plot. Each story has approximately 680 words. Eleven target words thought to be unfamiliar to kindergarteners were substituted for familiar words or phrases in each story. The target words from one story did not occur in the other story. Eight of the targets occurred twice in a story, and three occurred once. Posttest-only design was used. Children were examined individually. Children listened to an adult read the same storybook twice, from two to four days apart; each child listened to one study containing 11 target words. Although no word meanings were discussed, the story was briefly discussed. The experiment study showed that kindergarten expanded their recognition vocabularies significantly more words from listening to stories at least twice and
hear unfamiliar words repeated in the stories than words not in the story, therefore, according to Robbins and Ehri "storybook reading was effective for building [kindergartners'] vocabulary" (p.61).

Garvin and Walter (1991) conducted an exploratory study titled "the relationship among children's storybook reading behavior and knowledge about print concepts in kindergarten and their reading ability in first grade." The twenty one kindergartners between the ages of 5 to 6 years old were randomly selected and formed the morning and evening kindergarten sessions and taught by the same teacher using the same materials and methods of teaching. Emergent Reading Ability Judgments for Favorite Storybooks (ERAJFS) scale was used to measure children's storybook reading behavior as the following: (1) attempts governed by print; (2) attempts governed by pictures, stories formed; (3) attempts governed by pictures, stories not formed. In addition, Sulzby's story re-enactment scale and knowledge of print concepts as measured by the Concepts of Print Test by Clay was administered using familiar storybook The Surprise by George Shannon (2004). The teacher was instructed to read the story aloud to children during the regular classroom story time. The results showed that there was a positive correlation between storybook reading behavior and concepts about print. Kindergarteners' storybook reading behavior was positively correlated with their reading ability. Kindergarteners' knowledge of print concepts had positive but not statistically significant correlation with their reading ability. The researchers concluded that increasing experiences with storybook reading, children will develop concepts of reading and print which prepare them for formal reading instruction.

Frerichs (1993) investigated kindergarten teachers' perceptions and practices in reading and language arts and whether teachers were using practices to develop students' literacy skills using Maria Clay 138-items questionnaire involving reading, writing, concepts about
print, and letter/sound associations. Twenty-two kindergarten teachers participated in this study. The results indicated that "reading materials," "who read to whom," and reading and writing were matched as per the recommendations made by Clay. However, "Concepts About Print" test and letter/sound associations did not match as per the recommendations made by Clay.

**Methodology**

This study was carried out using experimental design. The Age (5, 6), Gender (male, Female), & Group (Control, Experimental) are independent variables where as Pretest and Posttest are dependent variables.

**Subjects**

The research was conducted in four kindergarten classrooms of English-speaking. All were nonreaders in the opinion of their teachers. The average class size was 20 and the children were ranging from five to six years old. They were randomly selected from a list of children's names provided by the principle. All the classes were taught by the same teacher, IQ test by Goodenough was administered, and social, economic, and education status of children's family survey was administered to ensure to have the unbiased sample. The total sixty students were selected. Thirty students were randomly selected for the control group and thirty were selected for the experimental group. Overall thirty students were male child and thirty were female child. Thirty children were five years old & thirty children were six years old. The control group students were given no treatment of storybook-reading where as all the students of the experimental group were given the proper treatment, of storybook-reading combining illustrations with language elements in conjunction with emphasize on instruction, in the classroom.
Instruments/Materials

A funny and engaging storybook, A Fun Man, by Patricia Jensen (1993), was selected for this study. Marie Clays' test, 2nd edition (2002) Concept About Print (CAP), was used to determine kindergartners' language awareness levels. Clay's test consists of 24 items in three areas: 1) rules of print -- how print supports the message; 2) language structures -- words, letters, sentences; and 3) punctuation mark -- comma, period, and question mark. The test materials included: 1) Sand, a 20 pages, complete picture book, which consists of a story describing a boy's experiences at the beach; 2) the test, which includes questions about language concepts related to the pictures (see Appendix B for John's four Patterns of Print Concepts Measured by the "Sand test"); and 3) a scoring standards checklist (see Appendix A for scoring standard checklist).

Reliability of the Instrument

The overall reliability of all the sixty subjects for the two items (pretest and posttest) was measured by using “SPSS12 for Windows” and the value of the Cronbach’s Alpha was equal to 0.635. This shows that overall test can be considered as reliable. Pearson Correlation was calculated for the control group between pretest and posttest. As per the hypothesis, we should expect a significant high positive correlation between pretest & posttest.

Validity of the Instrument

Since the study was sponsored by Public Authority for Applied Education and Training (PAAET), six professors from PAAET & two professors from Kuwait University have validated the instrument and the experimental procedure and they found that it was very much valid & reliable. In addition, the instrument was very much valid as it was
based on Patricia Jensen (1993) & Marie Clay’s test, 2nd edition (2002) and thus it can be considered as valid.

Data Analysis

The data analysis was done by using SPSS12 for Windows. It shows the actual scores of pretest, posttest and difference of posttest minus pretest, of each of the subjects of the control group and the experimental group. The differences in the means of overall data cannot be characterized as positive; however, there are positive effects for some students in the study.

The Table (1) shows the overall Mean, Standard Error of Mean & Standard Deviation of pretest & posttest for the control group and for the experimental group.

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Control group</th>
<th>Experimental Group</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest (1)</td>
<td>Posttest (2)</td>
<td>(2) - (1)</td>
</tr>
<tr>
<td>Mean</td>
<td>16.43</td>
<td>16.40</td>
<td>-0.033</td>
</tr>
<tr>
<td>Standard Error of Mean</td>
<td>.397</td>
<td>.409</td>
<td>.417</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>2.176</td>
<td>2.238</td>
<td>2.282</td>
</tr>
</tbody>
</table>

A Two-Way Analysis of Variance (ANOVA) is applied to test the research hypotheses. The dependent variable & two factors are defined as follows.
Dependent Variable: Difference of student’s score of Post-test minus Pre-test;
First Factor: CON_EXP with two levels, control group and experimental group;
Second Factor: Gender with two levels, male students & female students.

The results are shown in the following tables (2 & 2.1). Table (2) shows the means & standard deviation of “Difference of student’s score of Post-test minus Pre-test” for male & female students for each of the control & experimental groups.

Table (2)
Mean & Standard deviation for Male and Female Students

<table>
<thead>
<tr>
<th>Gender</th>
<th>CON_EXP</th>
<th>Difference of student’s score of Post-test minus Pre-test</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>Std. Deviation</td>
</tr>
<tr>
<td>Male</td>
<td>1. Control</td>
<td>.333</td>
<td>2.22</td>
</tr>
<tr>
<td></td>
<td>2. Experimental</td>
<td>-1.2667</td>
<td>3.39</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>-.4667</td>
<td>2.87</td>
</tr>
<tr>
<td></td>
<td>1. Control</td>
<td>-.4000</td>
<td>2.32</td>
</tr>
<tr>
<td>Female</td>
<td>2. Experimental</td>
<td>.2000</td>
<td>3.13</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>-.1000</td>
<td>2.71</td>
</tr>
<tr>
<td></td>
<td>1. Control</td>
<td>-.0333</td>
<td>2.28</td>
</tr>
<tr>
<td></td>
<td>2. Experimental</td>
<td>-.5333</td>
<td>3.21</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>-.2833</td>
<td>2.78</td>
</tr>
</tbody>
</table>
Table (2.1)
Two-Way ANOVA

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>Df</th>
<th>Mean Squares</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>23.917</td>
<td>3</td>
<td>7.972</td>
<td>1.038</td>
<td>0.383</td>
<td>0.05</td>
</tr>
<tr>
<td>Intercept</td>
<td>4.817</td>
<td>1</td>
<td>4.817</td>
<td>0.627</td>
<td>0.432</td>
<td>0.01</td>
</tr>
<tr>
<td>Gender</td>
<td>2.017</td>
<td>1</td>
<td>2.017</td>
<td>0.262</td>
<td>0.610</td>
<td>0.01</td>
</tr>
<tr>
<td>CON_EXP</td>
<td>3.750</td>
<td>1</td>
<td>3.750</td>
<td>0.488</td>
<td>0.488</td>
<td>0.01</td>
</tr>
<tr>
<td>Gender*</td>
<td>18.150</td>
<td>1</td>
<td>18.150</td>
<td>2.362</td>
<td>0.130</td>
<td>0.04</td>
</tr>
<tr>
<td>Error</td>
<td>430.267</td>
<td>56</td>
<td>7.683</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>459.000</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>454.183</td>
<td>59</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the Table (2.1), the results of Two-Way ANOVA show a non-significant main effect for gender, $F(1, 56) = 0.262$, $p = .61$, partial $\eta^2 = .01$, as well as a non-significant main effect for CON_EXP, $F(1, 56) = 0.488$, $p = .488$, partial $\eta^2 = .01$. The interaction between gender and CON_EXP is also non significant, $F(1, 56) = 2.368$, $p = .13$, partial $\eta^2 = .04$. From the various values $\eta^2$ we can conclude that the proportion of variance of the dependent variable, “Difference of student’s score of Post-test minus Pre-test”, that is related to a particular main (gender or CON_EXP) or interaction source (gender * CON_EXP), excluding the other main and interaction is either small (.01) or medium (.04).

Thus we can summarize that there is no significant difference of story book reading on print achievement between the two groups of students, CON_EXP (the one who did not get any treatment of story book reading, the other who got the treatment of story book reading) averaging across levels of the gender (male, female). Similarly there is also no significant difference of story book reading on print
achievement between male & female students averaging across levels of the CON_EXP (control group, experimental group). The interaction effect between gender & CON_EXP on story book reading on print achievement is also non significant.

A Two-Way Analysis of Variance (ANOVA) is applied to test the research hypotheses. The dependent variable & two factors are defined as follows.

Dependent Variable: Difference of student’s score of Post-test minus Pre-test;
First Factor: CON_EXP with two levels, control group and experimental group;
Second Factor: Age with two levels, 5 years & 6 years.

Table (3) shos the means & standard deviation of “Difference of student’s score of Post-test minus Pre-test” for students of ages 5 years & 6 years for each of the control & the experimental groups.

<table>
<thead>
<tr>
<th>Age (Years)</th>
<th>CON_EXP</th>
<th>Difference of student’s score of Post-test minus Pre-test</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>Std. Deviation</td>
</tr>
<tr>
<td>5</td>
<td>1. Control</td>
<td>.400</td>
<td>2.22</td>
</tr>
<tr>
<td></td>
<td>2. Experimental</td>
<td>-.733</td>
<td>3.39</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>-.1667</td>
<td>2.87</td>
</tr>
<tr>
<td>6</td>
<td>1. Control</td>
<td>-.4667</td>
<td>2.32</td>
</tr>
<tr>
<td></td>
<td>2. Experimental</td>
<td>-.333</td>
<td>3.13</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>-.4000</td>
<td>2.71</td>
</tr>
<tr>
<td>Total</td>
<td>1. Control</td>
<td>-.0333</td>
<td>2.28</td>
</tr>
<tr>
<td></td>
<td>2. Experimental</td>
<td>-.5333</td>
<td>3.21</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>-.2833</td>
<td>2.78</td>
</tr>
</tbody>
</table>
Table (3.1) shows the results of Two-Way Analysis of Variance (ANOVA) which is applied to test the following research hypotheses. For this the dependent variable & two factors are defined as follows.

Table (3.1)
Two-Way Analysis of Variance (ANOVA)

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Squares</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>10.583</td>
<td>3</td>
<td>3.528</td>
<td>0.445</td>
<td>0.722</td>
<td>0.02</td>
</tr>
<tr>
<td>Intercept</td>
<td>4.817</td>
<td>1</td>
<td>4.817</td>
<td>0.608</td>
<td>0.439</td>
<td>0.01</td>
</tr>
<tr>
<td>Age</td>
<td>0.817</td>
<td>1</td>
<td>0.817</td>
<td>0.103</td>
<td>0.749</td>
<td>0.00</td>
</tr>
<tr>
<td>CON_EXP</td>
<td>3.750</td>
<td>1</td>
<td>3.750</td>
<td>0.473</td>
<td>0.494</td>
<td>0.01</td>
</tr>
<tr>
<td>Age * CON_EXP</td>
<td>6.017</td>
<td>1</td>
<td>6.017</td>
<td>0.760</td>
<td>0.387</td>
<td>0.01</td>
</tr>
<tr>
<td>Error</td>
<td>443.600</td>
<td>56</td>
<td>7.921</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>459.000</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>454.183</td>
<td>59</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the Table (3.1), the results of Two-Way ANOVA show a non-significant main effect for age, $F (1, 56) = 0.103$, $p = .75$, partial $\eta^2 = .002$, as well as a non-significant main effect for CON_EXP, $F (1, 56) = 0.473$, $p = .494$, partial $\eta^2 = .01$. The interaction between age and CON_EXP is also non significant, $F (1, 56) = .76$, $p = .387$, partial $\eta^2 = .01$. From the various values $\eta^2$ we can conclude that the proportion of variance of the dependent variable, “Difference of student’s score
of Post-test minus Pre-test", that is related to a particular main (age or CON_EXP) or interaction source (age* CON_EXP), excluding the other main and interaction is small.

Thus we can summarize that there is no significant difference of story book reading on print achievement between the two groups of students defined by CON_EXP averaging across levels of the age (5, 6). Similarly there is also not a significant difference of story book reading on print achievement between the two groups of students defined by age averaging across levels of the CON_EXP (control group, experimental group). The interaction effect between age & CON_EXP on story book reading on print achievement is also non significant.

Some other statistical results are also given to highlight more on the effect of story book reading on print achievement. Before performing the experiment, researcher wanted to be sure that score of student achievement on print achievement for the two groups (control, experimental) prior to treatment can be assumed statistically equal with no significant difference in their mean values of score.

Table (4)
Independent-Sample T-Test for the variable “PRETEST”

<table>
<thead>
<tr>
<th>Grouping Variable</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Levine’s Test for Equality of Variances</th>
<th>T-Test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Control Group</td>
<td>30</td>
<td>16.43</td>
<td>2.176</td>
<td>.109</td>
<td>.742</td>
</tr>
<tr>
<td>Experimental Group</td>
<td>30</td>
<td>16.67</td>
<td>2.006</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Table (4) shows the results of independent sample t-test for the variable “pretest” with respect to CON_EXP (control group, experimental group). The sample means and standard deviations, for the pretest, for the control group is \( (M = 16.43, SD = 2.176) \) and for the experimental group is \( (M = 16.67, SD = 2.006) \). The Levine’s test for equality of variances for the two groups for the variable “pretest” was performed. The results of the Levine’s test \( (F = 0.109, p = .742) \) evaluate that the variances of the two groups for pretest could be considered equal. On the outcome of the results of the Levine’s test, an independent sample \( t \) test was conducted (assuming equal variances) to determine if there was a significant difference in the means of the control group and the experimental group for the “PRETEST”. The value of \( t (58) = -0.432, p = .667 \) shows that mean values of “PRETEST” for the control group and for the experimental group do not differ significantly at \(.05\). Thus one can conclude that print achievement for the two groups prior to treatment can be assumed equal.

Since storybook reading is expected to heighten print achievement, one would expect the average of the posttest score minus the pretest score to be positive. In other words the students who received the instructions should score higher on the posttest than on the pretest.

### Table (5)

One-Sample T-Test Selecting only Experimental Group

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error of Mean</th>
<th>( t )</th>
<th>Df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difference in Scores (posttest - pretest)</td>
<td>30</td>
<td>-0.533</td>
<td>3.21</td>
<td>0.587</td>
<td>-0.909</td>
<td>29</td>
<td>0.371</td>
</tr>
</tbody>
</table>
The Table (5) shows a one-sample t test was conducted on this “difference in scores of posttest & pretest” to evaluate whether their mean difference in score was significantly equal to zero. The average of difference of the posttest minus pretest for the experimental group is $M = -0.5333$, $SD = 3.21$, and standard error of mean is $0.587$. The observed significance level associated with a value of $t (29) = -0.909$, is $p = 0.371$. This shows that 37% of the time a difference of at least this size would occur when the two population means are equal. There doesn’t seem to be much reason to believe that the means differ significantly in the population and thus we fail to reject our hypothesis of difference of two means equal to zero. Although further investigation is needed, the results of this data analysis indicate that instruction combined with story book reading may actually have a negative effect on test scores ($M = -0.53$).

**Discussion**

Before performing the test, research wanted to be sure, by performing an independent sample t-test (Refer Table: 4), that there is no statistical significant difference between the control group & the experimental group on their score of print achievement defined by “PRETEST”. Results of One-Sample t-test (Refer Table: 5) show that even the “experimental group” students did not show any statistical significant difference in their “difference of score of print achievement (posttest minus pretest)”. Two-way analysis of variance was performed on the “difference of score of print achievement (posttest minus pretest)” by gender & CON_EXP (control, experimental), (Refer Table: 2.1, 2.2), as well as by age & CON_EXP (control, experimental), (Refer Table: 3.1, 3.2). Main Effects of gender, age, & CON_EXP (control, experimental) shows no significant difference of story book reading on print achievement. The interaction effects of CON_EXP & gender as well as CON_EXP & age show no significant difference on the print achievement. It is very
interesting to note that the gender of the child or the age of the child (from 5 years to 6 years old) did not make a significant difference in the print-recognition achievement.

However, the researcher believes that there are positive and negative effects for each individual student. This might relate to the small sample size or it might also suggested that kindergartners learn according to Clay (1979) through the exposure of an increase experiences with storybook-reading to assist them match speech and print to construct awareness of word boundaries in scaffolding manner where teacher guides and supports than instructs the child's learning. Clay's viewpoint correlates with Dunkin (1975) when he pointed out that lessons don't assist children develop print awareness; rather it is a "product of many experiences with meaningful text spread out over time" (p.82). Practically, after discussing the finding with the classroom teacher, she claimed that during the process of reading the storybook combining with instruction about the language elements in the story, children were asking many questions showed that they were confused and doubted their knowledge about how reading concepts function in writing. For example, when the teacher asked Caser, an experimental group subject, to point out where to start reading he pointed to the blank area. This was in direct contradiction to the first time he was asked this question, during the pre-test, when he pointed to the correct place. Another student, Whitney, responded to all the questions regarding reading concepts "I don't know," despite the fact that she has answered all the questions correctly on the pretest. The way children learn is supported in the Smith (1985) stating that "children are highly skilled and experienced learners... we do not have to train [them] to learn, or even account for their learning; we have to avoid interfering with it" (p. 26). The results of the finding showed that formal reading instruction intimidates children, making them question their knowledge, while using storybook-reading
encourage children's appreciation, understanding, and practice of their language.

**Recommendation**

Further investigation is needed. One may get some different results if the test is repeated with a much larger sample size. In conclusions, researcher feels that one must exercise caution in interpreting the results of the analysis above. Small sample sizes mean that the statistical tests lack power. In other words, if the sample size is small, you would not be able to detect even the large differences. On the other hand, if the sample size is very large, even small differences can be statistically significant.

**REFERENCES**


- Box, J., Aldridge, J. (1993). Shared reading experiences and Head Start children's concepts about print and story


- Nielson, D., Klesius, N., & Griffith, B. (2002). The effects of four approaches to group storybook-reading in
kindergarten on story comprehension, story structure knowledge, and concepts of print. The Reading Teacher 57(1), 34-51.


- Shannon, G. (2004). The effects of an early reading g curriculum on language and literacy development of head