Jessica A. Peterson.  Checking Out or Checking Into Reading? The Borrowing Habits of Elementary School Children In Relation to Gender, Age, and Reading Ability.  A Master's Paper for the M.S. in L.S degree.  April, 2008.  50 pages.  Advisor: Brian Sturm

Research regarding the reading preferences of children often focuses on the differences between boys and girls, but rarely looks at reading ability as a factor.  The purpose of this study is to address the connection between children's reading preferences and reading ability.  By looking at the school library circulation records of $2^{nd}$, $3^{rd}$, and $4^{th}$ grade students, this study examines relationships between gender, age, reading ability, and the reading preference of elementary school children.

Quantitative data was collected from circulation records in order to find trends related to Fiction or Non-Fiction reading choice based on a student's reading ability, age, and gender.  Fiction and Non-Fiction are determined based on call numbers of books checked-out; specifically, those titles that are picture or chapter books are considered Fiction, whereas those labeled with Dewey Decimal coding are considered Non-Fiction.  Reading ability – in terms of reading level scores (II, III, or IV) – is determined by the North Carolina End-of-Grade Test in Reading.  The hope is that the results of this study may contribute to further research and discussion addressing the relatively poor literacy performance of boys compared to girls both in school and on standardized achievement tests.

Headings:

       Children – Books and reading – United States

       Academic achievement – United States

       School children – Books and reading – United States

       Reading (Elementary) – Ability testing

       Children – Reading interests – United States

CHECKING OUT OR CHECKING INTO READING?  THE BORROWING
HABITS OF ELEMENTARY SCHOOL CHILDREN IN RELATION TO GENDER,
AGE, AND READING ABILITY

by
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of the School of Information and Library Science
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Approved by

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Brian Sturm

TABLE OF CONTENTS

Introduction

Research regarding the reading habits of children suggests several significant trends of interest to educators, librarians, child psychologists, and other professionals who work with children. Foremost amongst these trends that affect reading habits are age and gender; specifically, that preferences change as children get older and boys and girls may exercise different reading habits. What these trends mean is still being explored. Yet, one notable connection is the relatively poor literacy performance of boys compared to girls both in school and on standardized achievement tests.

Concern over this "gender gap" has prompted much research. Studies attempting to explain the discrepancy between girls' and boys' academic achievement often look at reading preferences; specifically, if there is a difference in the reading habits and choices of boys and girls. Additionally, studies have looked at how these habits change over time – particularly, as the gap widens around middle school.

Yet, while much research has considered age and gender as factors influencing a child's reading preference, few researchers have considered reading ability as a variable. Further, few have looked at the impact Non-Fiction books can have on literacy and academic achievement. Those studies that have considered reading ability have found interesting patterns; many of which have prompted contradictory opinions. While there is a consensus that boys perform relatively poorly

compared to girls in reading, the reasons suggested for different reading preferences vary widely.

Arguments range from the high use of Fiction texts in reading assessments to the idea that the interests of boys are not sufficiently represented in a library's collection. Other arguments claim that poor readers pick visually dense Non-Fiction books, while yet another argument suggests choosing "difficult" Non-Fiction books inhibits reading development (Moss 101, 102 & 104; Moss & McDonald 402). The trends themselves are more apparent: boys read Non-Fiction more than girls, and the preference for Non-Fiction seems to be related to reading ability.

And, so, there appears to be a relationship between reading ability assigned by educators and reading preference. So, while this study continues to look at children's reading preferences in regards to age and gender, it also addresses the connection between reading ability and reading preference. Do elementary students check out more Fiction or Non-Fiction titles? Does this number change as they get older? Is there a difference in choice between genders? And is there a difference in choice between reading abilities?

This study aims to look at three factors in relation to reading preference: age, gender, and school designation of reading ability. For the purposes of this study, the reading preferences of elementary school students ($2^{nd}$-$4^{th}$ grade) are considered. *Why* Fiction is chosen over Non-Fiction, and vice versa, is not addressed in this study. Rather, the objective here was to collect quantitative data on the reading choices (Fiction or Non-Fiction) of elementary school readers in relation to gender, age, and reading ability, and see what patterns emerge.

This data was gathered by analyzing three months of circulation records provided by an elementary school library in Chapel Hill, North Carolina. Reading ability was determined based on end-of-grade reading comprehension tests administered to 3rd and 4th graders in North Carolina. The Fiction and Non-Fiction titles checked out by 2nd-4th graders were studied in relation to gender, age, and reading ability.

<p style="text-align:center">Literature Review</p>

*Age, Gender, and Ability as Variables*

Studies regarding reading preferences of children have nearly always concerned themselves with what and how children read. Sturm noted in his 2003 paper on children's interests that much of this research has explored what effect age and gender have on these habits. These findings have often suggested that age and gender do indeed affect reading preferences and these preferences change as a child grows older (39). He emphasized the best method for studying children's interests is longitudinal: following the same children over time. This, however, is a difficult task. Two methods, then, have typically been employed: longitudinal studies specific to a particular age or grade level and studies that offer a snapshot of a range of ages (39).

As stated, studies that ask what children are reading commonly use gender and age as factors. Race and socioeconomic status have also been considered. Rarely, though, has the research used reading ability and/or academic achievement as variables. As Coles and Hall put it, "[T]he conceptualization of the problem comes to be seen in a simple dichotomized way as being about the relative performance of boys

on the one hand and girls on the other. It is, of course, about the achievement of some boys and some girls" (104).

Worthy, et. al, looked at the reading preferences of sixth-grade students through a 1999 survey and interviews. They found more similarities than differences when considering gender, achievement, income, and attitude (20). They did find, however, that those students who scored highest in the state reading competency test ranked funny novels and adult books higher than those students who scored lowest (21). Conversely, the students who had scored lowest on the test ranked information books about drawing or cars/trucks higher.

Priest-Ploetz, an elementary school library media specialist in New York, used circulation records in her library media center to investigate the reading preferences of early childhood readers and found a connection between reading preference and reading ability. Her findings were published in 2003 in *Library Media Connection*, a professional magazine for school library media specialists. She found that those classes with the highest number of "remedial" readers tended to favor Non-Fiction (24-25).

In 2000, Moss emphasized the relationship between reading preference, gender, and a child's designated reading ability. The study – the *Fact and Fiction Research Project* – explored how boys and girls react to judgments made about their reading proficiency; specifically, whether preference for Non-Fiction and reading underachievement were linked. For two years, the project looked at children (ages 7-9) based in four different schools in England. The researchers used intensive

classroom observation, interviews, and questionnaires, to chronicle the reading habits of boys and girls from wide-ranging socioeconomic backgrounds.

The premise that boys' preference for Non-Fiction is tied to underachievement was based on the assumption that the Non-Fiction texts they were selecting were often more difficult to read than narrative Fiction (101). This was not verified by the study, however. While boys most likely to choose Non-Fiction texts during quiet reading time were those designated 'weak readers,' the study found that, in an effort to avoid negative judgment by their peers, weaker boy readers would choose Non-Fiction titles that were typically non-linear and visually dense in order to spend less time on verbal text (103). These texts did not require "close attention," and therefore, would cause the reader to stagnate (104). Conversely, weaker girl readers were less likely to avoid negative judgment from their peers. They were more likely to spend time reading 'easy' narrative Fiction, which in turn, would also cause them to stagnate as readers (103). So, while boys who were considered 'weak' readers were reluctant to spend time reading in general, girls who were considered 'weak' readers were reluctant to spend time reading more demanding text, including Non-Fiction (105).

Dreher also made note of this pattern in her 2003 paper on struggling readers. She highlighted previous research – including Juel's 1988 longitudinal study – that found struggling readers avoid reading, and therefore, do not get the practice they need to become competent readers (26). Consequently, if they lack competent reading skills, their chances of succeeding in all academic areas are significantly diminished

(26). She pointed to previous research that the more children read, and the broader their reading choices, the more likely they are to succeed academically (33).

### *Influence of Non-Fiction Information Books on Reading Achievement*

Dreher also suggested a strong connection between reading information books and academic achievement. Dreher pointed to the research done by the National Assessment of Educational Progress (NAEP). Their interviews found that those fourth-graders who read stories, magazines, and information books, showed the highest achievement. Those fourth-graders who only read one type of material (only stories, or only magazines, or only information books) showed the lowest achievement (27). In addition, those students in the highest performing schools read more information books than those students in the lowest performing schools (27).

Simpson's 1996 study investigating the reading practices of boys and girls found that girls not only read more, but read narrative Fiction almost exclusively. Yet, while boys read less, they did read a wider range of materials which included both expository and information texts (276). Simpson's sample was comprised of a class of 30 middle and low-income children (10-12 years old). For three terms, she visited the school in order to observe the reading circles and informally interview the children individually and in groups. Interestingly, she also found that the boys were generally not reading those novels the teacher valued in her reading program and in her assessments.

Moss also found this to be the case in her 2000 study. She noted that the well-established procedures for assessing readers were almost entirely related to Fiction texts and that "reading Fiction [was] strongly framed as a matter of proficiency"

(102). These procedures often involved reading Fiction aloud, with the rare Non-Fiction exception.

Millard stressed this in her 1997 paper outlining the influences that shape reading attitudes and expectations. She argued that school curriculum often promotes particular forms of literacy that are more appealing to girls than boys (31). Millard went further than just noting the use of narrative Fiction in reading assessments; she suggested that because girls tend to read more willingly, they "locate themselves successfully within the dominant literacy of schooling and gain fluency in the modes of reading and writing that bring success in academic work and examinations" (46).

Coles and Hall also suggested this in their 2002 paper presenting evidence from the *WH Smith Children's Reading Choices Project*. The project administered a national questionnaire survey to children ages 10-14. The study also included semi-structured interviews with a small sample of the respondents. The project's findings supported the notion that boys tend to read less than girls. Interestingly, however, it also found that boys were more likely to read a broad range of materials, including Non-Fiction (103). While only 2.8 percent of the sample read Non-Fiction exclusively, 78 percent of these readers were boys.

Haynes and Richgels also found this in their 1992 study of nearly 500 fourth-graders. These students expressed their literature preferences on a 68-item title inventory using 26 categories of Fiction and Non-Fiction (e.g., historical Fiction and biography) and over-arching factors that were inclusive of both Fiction and Non-Fiction (e.g., "Social Sciences" and "Adventure"). The findings showed that Non-Fiction categories were not evenly distributed amongst the factors favored most

highly among girls. Girls were also more likely to distinguish between Fiction and Non-Fiction in their preferences (216). For example, Non-Fiction categories dominated "People and the Universe" (e.g., biography and hobbies/crafts), while Fiction titles categories dominated "Growing Up" (e.g., romance and folktales) (216). Boys, on the other hand, were more likely to have Non-Fiction and Fiction categories evenly distributed amongst their highly preferred factors and were less likely to differentiate between Fiction and Non-Fiction. For example, their top factor was "Fantasy/People and Their Trials," which included both Fiction and Non-Fiction categories like historical Fiction, myths, and current events.

*Circulation Records as Indicators of Reading Preference*

Moss and McDonald observed in 2004 that common research methods for studying children's reading behaviors include surveys, interviews, and observation (401). Harkrader and Moore made note of these research methods in 1997, but also pointed to circulation records, as well (326). Moss and McDonald used school library borrowing records to explore the reading habits of 10-11 year-olds. Specifically, they were interested in reading as a social practice and how reading networks affected not just reading habits, but text choice. Rather than looking at choice in terms of genre or subject, they looked at choice in terms of "design characteristics" (405). This included length, size of typeface, number of illustrations and their size, page layout, reading paths (i.e. non-linear, linear, or linear-dip), and text organization (i.e. picture-led, text-led, and text/picture composites) (405-06).

Two-thirds of the sample was boys, so the researchers had expected a high number of titles checked out to be Non-Fiction. Instead, only 10 percent of the titles

borrowed were Non-Fiction. They did find that those children with special educational needs were more likely to borrow Non-Fiction. They were also more likely to pick linear-dip (sequentially organized text in short chunks that readers can choose between – e.g., poetry) or non-linear texts. Interestingly, however, reading attainment – as determined by standardized test scores – did not seem to be connected to text choice in this study (408).

Priest-Ploetz's collection development investigation used circulation records in order to gauge whether students were checking out more Fiction/fairy-tale or Non-Fiction books. She sampled from K-2 grades and found that, of nearly 400 students, only 39 percent checked out Fiction titles. This number increased from October to December, but the overwhelming majority of students still preferred Non-Fiction (24).

Moss and McDonald noted that circulation records might be useful in exploring other aspects of reading habits, including investigating how and why readers select certain books to check out at a library and looking at what readers do with their books once they've checked them out (411). They emphasized that the full potential of utilizing library records remains to be explored (411).

*Implications of Previous Research*

Sturm's 2000 study analyzed an open-ended survey conducted by the State Library of North Carolina in order to determine what children want to know more about. Sturm found a strong similarity between the interests expressed by both boys and girls (49). This similarity is also noted by Dreher, who pointed to research that has cautioned against making rigid generalizations based on gender (28).

Yet, while it's important to keep in mind that the patterns found in these studies should not be used to label individual children, they have pointed to trends that those who work with children can use to foster stronger readers. Often, these studies have concluded that educators must advocate *freedom* in children's reading choices. As Merisuo-Storm put it in her 2006 paper describing her study of girls' and boys' attitudes towards reading and writing, "With interesting reading material, it is possible to encourage even the most reluctant reader to read" (124).

Moss stressed this freedom by advocating not only choice in texts, but in purpose. She called for "actively teaching reading in its fullest sense" (105). Millard argued that schools need to value – and reward – those literacies that are utilized outside the academic environment; particularly, those literacy practices that go beyond the selection and reading of Fiction titles (48). She highlighted the need to re-define what it means to be "properly literate;" for example, facility with different forms of electronic media (48).

Moss and McDonald suggested that while it's important to provide an inclusive and wide range of reading materials in the classroom and library, it's even more important to recognize "the different kinds of demands they make on readers, and the different kinds of pleasures they afford" (410). They pointed to what they believe the teacher's role should be: monitoring and encouraging readers to explore their interests and *expand* their reading *experiences* (410).

Researchers have often pointed to the failure of schools in bringing extra-curricular interests – and reading habits – into the classroom. Coles and Hall argued that the "cultural disjunctions and dissonances between home and school" raise

barriers to the success of many groups of children (104). They suggested that reading cultures outside of school should be linked to the school literacy environment (104).

<div align="center">Methodology</div>

This study addresses the relationships between gender, age, reading ability, and a child's reading preference. In order to address the research questions asked in this study, age is operationalized as grade level (2nd, 3rd, or 4th grades), reading ability is determined by end-of-grade reading comprehension test scores, and reading preference is determined by Fiction or Non-Fiction check-outs from an elementary school library.

Quantitative data was collected by looking at three months of circulation records provided by an elementary school library in Chapel Hill, NC. The Executive Director of Testing and Program Evaluation for the Chapel Hill-Carrboro Schools, as well as the Library Media Specialist for the elementary school, provided reading ability assessments and circulation records for every child in each of these grades. The Fiction and Non-Fiction titles checked out between Feb-Apr 2007 were identified as either Fiction (picture or chapter books) or Non-Fiction (books catalogued using Dewey Decimal coding). Reading ability was determined by May 2007 EOG test scores, and as such, the circulation records used correspond to this time-frame.

The circulation records of 218 students in 2nd, 3rd, and 4th grades were analyzed in order to study any patterns based on age and gender. This included 63 2nd graders, 92 3rd graders, and 63 4th graders. This also included 103 boys and 115 girls.

*Reading Ability as a Variable*

"Reading ability" was determined by the 2007 North Carolina End-of-Grade Reading Comprehension Test scores. Since the 3rd grade pre-test scores were unavailable and 2nd graders do not take EOG tests, only the circulation records of 3rd and 4th grade boys and girls will be compared to reading ability as determined by these EOG scores.

EOG tests are aligned with the North Carolina *Standard Course of Study* for English/Language Arts with the intent of measuring student performance on these goals, objectives, and competencies. EOG scores are divided into four levels: I, II, III, and IV. The meaning of each level score is described below:

> I: Students performing at this level do not have sufficient mastery of knowledge and skills in Reading to be successful at the next grade level.
>
> II: Students performing at this level demonstrate inconsistent mastery of knowledge and skills in Reading and are minimally prepared to be successful at the next grade level.
>
> III: Students performing at this level consistently demonstrate mastery of grade level Reading skills and are well prepared for the next grade level.
>
> IV: Students performing at this level consistently perform in a superior manner clearly beyond that required to be proficient at grade level Reading skills.
>
> *(http://dpi.state.nc.us/accountability/testing/)*

Since 2nd graders' reading assessments were unavailable, only 3rd and 4th graders were considered using all three variables: age, gender, and reading ability. The circulation records of 2nd graders were considered using only age and gender. No 3rd or 4th grader at this elementary school performed at Level I. Six students performed at Level II, 40 students performed at Level III, and 84 students performed at Level IV.

*Data Collection*

      To address the questions posed in this study, the months of February, March and April of 2007 were considered. First, it is believed that the borrowing habits of these children at the end of the year more accurately reflect the reading ability assessed by the end-of-grade test than months earlier in the year. Second, this study is not looking at how the reading preferences of specific 2$^{nd}$ or 3$^{rd}$ or 4$^{th}$ graders change over the course of a school year. Instead, this study is focusing on the differences between 2$^{nd}$, 3$^{rd}$, and 4$^{th}$ graders. Third, for the purposes of this study, three months are believed to be more revealing than one, while three months are thought to be sufficient in providing meaningful results. Finally, February, March, and April were chosen because of the belief that records pulled from months any later in the year would be marred by the many end-of-the-year activities interrupting more normal circulation in the school library.

      A spreadsheet was used to mark how many Fiction and Non-Fiction titles an individual checked out during these three months. Non-Fiction titles were also organized by Dewey Decimal coding. See the example below.

| Grade | Gender | Reading Level | Fiction # | 001- 099 | 100- 199 | 200- 299 | 300- 399 | 400- 499 | 500- 599 | 600- 699 | 700- 799 | 800- 899 | 900- 999 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | G | | 11 | | | | 2 | | | | | | |
| 3 | B | IV | | | | | | | | | | | |
| 3 | B | III | 5 | 2 | | | | | 2 | | 2 | | 1 |
| 4 | G | IV | 7 | | | | | | | | | | |

Data were analyzed for patterns that emerged based on age (is there a difference between Fiction and Non-Fiction preference by grade level?), based on gender (is there a difference between Fiction and Non-Fiction preference by gender within a grade level?), and finally, reading ability (is there a difference between Fiction and Non-Fiction preference by reading ability within a grade level? between genders? within a grade level and gender?)

*Reliability and Validity*

Babbie defines *reliability* as "a matter of whether a particular technique, applied repeatedly to the same object, yields the same result each time" (140). In this study, the technique used is circulation records provided by an elementary school library and test scores provided by the NC Reading Comprehension EOG Test. If another researcher were to conduct this study using the same months and the same criterion for reading ability and Fiction and Non-Fiction preference, it is believed that he or she would come up with the same results. If the technique in this study, however, required asking children which books they prefer to check out ("Everybody" books or information), it is believed that the results this researcher would find could be notably different from another researcher's results using the exact same method.

Babbie defines *validity* as "the extent to which an empirical measure adequately reflects the real meaning of the concept under consideration" (143). In this particular study, these concepts include "reading preference" and "reading ability."

Age and gender are also included, but their meaning as defined in this paper is generally understood as such.

In the case of Fiction and Non-Fiction "reading preference," this study measures it by using the call numbers assigned by a media specialist in the library's catalog. This criterion-related validity is based on an external criterion: the Dewey Decimal system for assigning Non-Fiction titles, in addition to a certified library media specialist's judgment in placing books within either the Non-Fiction or Fiction sections in a library intended for elementary school-aged children.

In the case of "reading ability," this study measures it by using the scores as provided by the North Carolina EOG Reading Comprehension Test. This criterion-related validity is also based on an external criterion: the descriptors of Levels I-IV as determined by these state assessments. Not only does this satisfy this study's purpose in conducting valid research, but it is also part of one of the study's larger research questions: Does the reading ability as determined by the school/district/state relate to a child's preference for Fiction or Non-Fiction books?
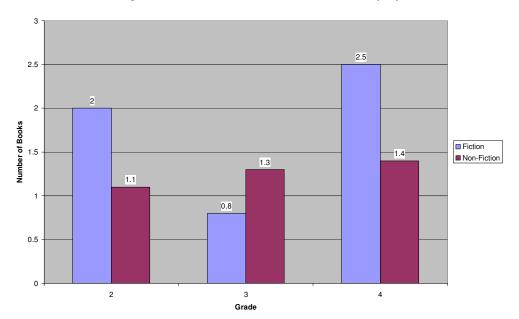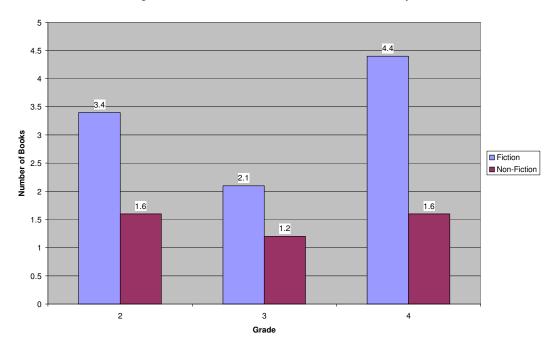
<u>Results</u>

*Gender and Reading Preference*

The average number of books checked out by boys and girls was calculated. Girls checked out more books than boys, on average, in all grades. The smallest difference between books checked out by boys and girls was in the 3$^{rd}$ grade.

Boys and girls checked out a similar number of Non-Fiction books in every grade, whereas girls checked out more Fiction books than boys in every grade. The biggest difference in Fiction books checked out, on average, between girls and boys was in the 4th grade. The smallest difference was in the 3rd grade. See the figures below.
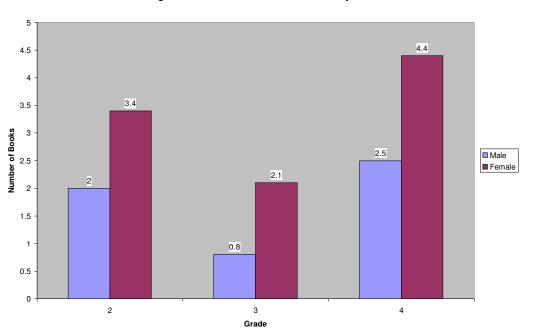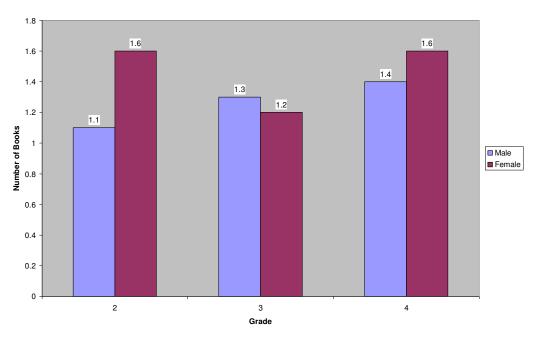
**Average Number of Fiction and Non-Fiction Books Checked Out by _Boys_**

**Average Number of Fiction and Non-Fiction Books Checked Out by *Girls***



**Average Number of Fiction Books Checked Out by *Gender***

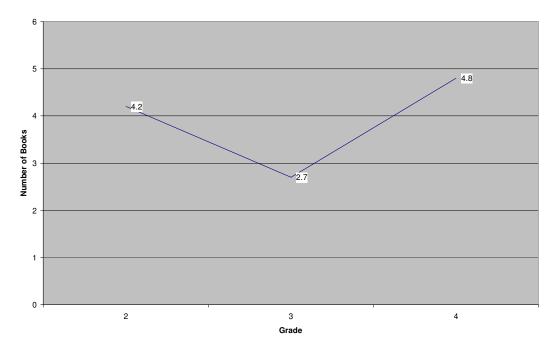**Average Number of Non-Fiction Books Checked Out by *Gender***
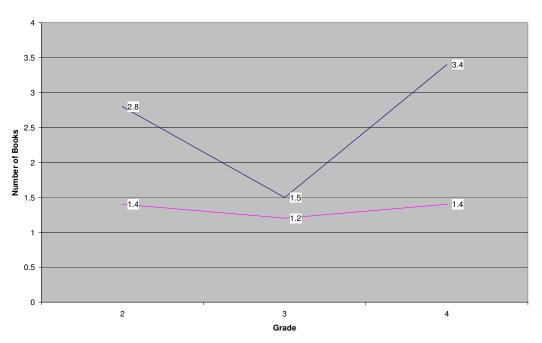


## *Grade and Reading Preference*

The number of books checked out by 2nd, 3rd, and 4th graders was calculated. 4th graders checked out, on average, more books. 3rd graders checked out the least.

The average number of Fiction and Non-Fiction books checked out by grade was calculated. Every grade checked out more Fiction books, on average, than Non-Fiction books. The difference between Fiction and Non-Fiction book check outs was the smallest in 3rd grade, while the biggest was 4th grade. (See Appendix B for more charts).

**Average Number of Books Checked Out by *Grade* (Feb, Mar, Apr 2007)**



**Average Number of Fiction and Non-Fiction Books Checked Out by *Grade***

*Reading Ability and Reading Preference*

In addition to levels, because raw scores are more exact and because only six students performed at Level II and no students performed at Level I in this elementary school, the results are shown in more detail through raw scores. EOG levels can be broken down into raw scores, based on grade level. See the chart below for the level ranges.
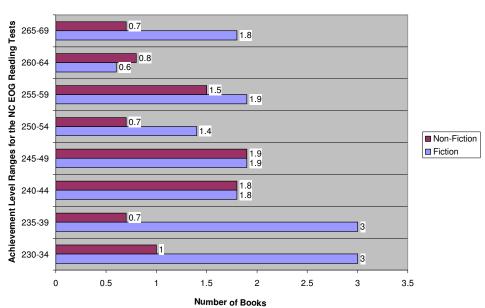
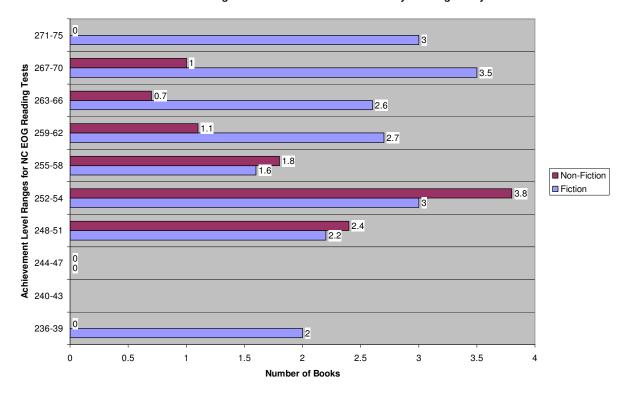| Grade | Level I | Level II | Level III | Level IV |
|-------|---------|----------|-----------|----------|
| 3     | 216-29  | 230-39   | 240-49    | 250-72   |
| 4     | 223-35  | 236-43   | 244-54    | 255-75   |

http://dpi.state.nc.us/accountability/testing/

Since there were few students who performed at Level II in the 3$^{rd}$ and 4$^{th}$ grades at this elementary school, comparisons to the lowest performing students are considered with caution. Of important note is that there was only one Level II student in 4$^{th}$ grade and five Level II students in the 3$^{rd}$ grade (see Appendix C). If Level II is not considered, reading preference patterns are clearer.

If Level II in 3$^{rd}$ grade is not considered because of its small number, the difference in Fiction check outs between lower and higher performing students is slight, as is the difference in total books checked out. If Level II in 4$^{th}$ grade (n=1) is not considered, higher performing 4$^{th}$ graders checked out more total books and Fiction than lower performing 4$^{th}$ graders. The higher performing 4$^{th}$ graders also checked out more Fiction than Non-Fiction, while the lower performing 4$^{th}$ graders

generally checked out similar amounts of Fiction and Non-Fiction.  Lower

performing 3rd and 4th graders, on average, also checked out more Non-Fiction than

higher performing 3rd and 4th graders. The difference is more pronounced between

lower and higher performing 4th graders. See the figures below.

**3rd Grade: Average Number of Books Checked Out by Reading Ability**

**4th Grade: Average Number of Books Checked Out by Reading Ability**



No strong patterns were found for 3rd and 4th grade girls in relation to reading ability, even with the exclusion of Level II (see Appendix D). Lower performing 3rd and 4th grade boys, however, checked out more Non-Fiction than higher performing 3rd and 4th grade boys. See the figures below.

**3rd Grade Boys: Reading Preference by *Reading Ability***



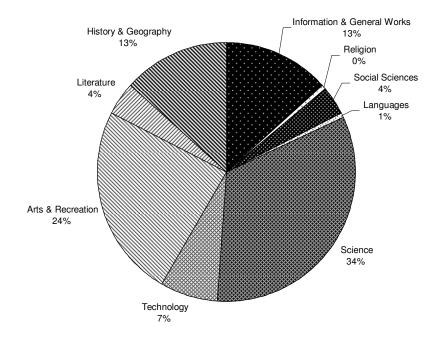**4th Grade Boys: Reading Preferences by *Reading Ability***

*Non-Fiction Reading Preference*

The Non-Fiction circulation records collected in this study were broken down by Dewey Decimal ranges. The 294 Non-Fiction check outs of 2nd, 3rd, and 4th graders were analyzed. See the table below for a description of the Dewey ranges.

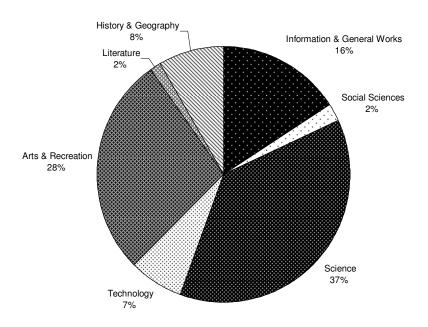| 001-099 | 100-199 | 200-299 | 300-399 | 400-499 | 500-599 | 600-699 | 700-799 | 800-899 | 900-999 |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Information & General Works | Philosophy & Psychology | Religion | Social Sciences | Languages | Science | Technology | Arts & Recreation | Literature | History & Geography |

Consistently popular ranges across grades and gender included Information & General Works, Science, Arts & Recreation, and History & Geography. Science was the most popular choice. Arts & Recreation was the second most popular choice. The least popular ranges included Social Sciences and Religion. No child checked out a book within the Philosophy & Psychology range.

**Non-Fiction Preferences (2nd, 3rd, and 4th Grades)**

History & Geography
13%

Information & General Works
13%

Religion
0%

Social Sciences
4%

Literature
4%

Languages
1%

Arts & Recreation
24%

Science
34%

Technology
7%

Science was most popular amongst 2$^{nd}$ grade girls, 3$^{rd}$ grade boys and girls, and 4$^{th}$ grade boys and girls. Arts & Recreation was also popular amongst all genders in all grades, being the most popular choice for 2$^{nd}$ grade boys. History & Geography was more popular amongst 3$^{rd}$ and 4$^{th}$ grade girls than boys, though it was equally popular amongst 2$^{nd}$ grade boys and girls. (See Appendix E for more charts). No boys checked out books within Languages, Religion, and Philosophy & Psychology. Girls checked out from every subject except for Philosophy & Psychology.

**Boys: Non-Fiction Preferences**

History & Geography
8%

Literature
2%

Arts & Recreation
28%

Information & General Works
16%

Social Sciences
2%

Science
37%

Technology
7%

**Girls: Non-Fiction Preferences**

History & Geography
18%

Literature
6%

Arts & Recreation
21%

Technology
7%

Information & General Works
12%

Religion
1%

Social Sciences
5%

Languages
1%

Science
29%

<u>Discussion</u>

This study of 218 2nd, 3rd, and 4th graders found that girls checked out more Fiction than Non-Fiction, they checked out more Fiction than boys, and they also checked out more total books than boys. This supports previous research. In 2002, Coles and Hall found that boys read less than girls (103) and Simpson's 1996 study found that girls read more than boys and read Fiction almost exclusively (276). While this study did not find that girls checked out Fiction exclusively, they did check out more Fiction.

This study also found that there were more similarities than differences between boys and girls. Worthy, et. al, in 1999, Dreher in 2003, and Sturm in 2003 noted this in their respective studies (20; 28; 49). Of Non-Fiction books checked out, boys and girls both preferred Arts & Recreation and Science the most and Psychology & Philosophy the least. While it is unclear what specific topics the children were interested in from this study's findings, it is interesting to note that "Science" titles under the Dewey classification system include books on animals and dinosaurs and "Arts & Recreation" titles under the Dewey classification system include comic books, drawing books, and books on sports. Another popular Dewey range for both boys and girls was "General Information" which includes books of world records and books on aliens. Another consistently popular range across grades and genders was "Technology," which includes books on pets like dogs, cats, and hamsters, as well as books on cars and trucks. (See Appendix F for a Dewey Decimal summary).

Worthy, et. al, found in 1999 that students who scored lowest in a state reading assessment favored drawing books and books on cars/trucks more than

highest performing students (21). While one low performing student in this study picked books from "Arts & Recreation" (which includes drawing books) and "General Information," this study found a different pattern. The nine lowest performing 3rd and 4th graders in this sample (4 boys and 5 girls) checked out "Technology" and "Science" the most. As noted before, these ranges include books on pets, animals, dinosaurs, and cars/trucks.

Worthy, et. al, also found that the highest performing students preferred funny novels and adult books (21). While it is impossible to discern whether the books chosen in this sample were "funny" or "adult-themed," the eleven highest performing students in this study (5 girls and 6 boys) did check out far more Fiction than Non-Fiction. Of 36 books checked out, only eight were Non-Fiction.

Previous research has also shown that children check out more Fiction as they get older. Both Sturm and Priest-Ploetz noted this (39 & 24-25). This study showed a drop not only in Fiction books, but in overall books checked out from the 2nd to 3rd grade. Fourth graders did, however, check out the most Fiction. The reason for the drop between 2nd and 3rd grades could be for a variety of reasons, notably the much larger sample of 3rd graders (92 3rd graders versus 63 2nd and 63 4th graders) or the possibility that some classes visited the library more or less often than other classes.

Previous research has found that boys who perform poorly on reading assessments favor Non-Fiction texts. Priest-Ploetz found that classes with the highest number of "remedial" readers favored Non-Fiction (24-25), while Moss found that weaker boy readers were most likely to choose Non-Fiction (103). This study supports this notion. The lower performing boys, both in the 3rd and 4th grades,

checked out more Non-Fiction than the higher performing boys. There was no strong pattern between lower and higher performing girls in the 3rd and 4th grades. The girls in this study did check out more Fiction than Non-Fiction, but it is not related to reading ability.

As noted, this study found that girls checked out more books than boys, they checked out more Fiction than boys, and they checked out more Fiction than Non-Fiction. Of related note is the fact that six percent of the Non-Fiction subjects checked out by girls were "Literature" (which includes poetry). Girls checked out from the "Literature" range in every grade, while boys only checked out from the "Literature" range in 2nd grade.

This study also supports the pattern found in the *Fact and Fiction Research Project*, in which girls who were considered "weak" readers spent more time reading Fiction than boys considered "weak" readers (103). Yet Simpson and Coles & Hall found that while boys read less than girls, they were more likely to read a broad range of materials (276 & 103). This notion was not completely supported in this study. Though girls did read more Fiction than Non-Fiction, the top picked Dewey ranges were similarly popular between boys and girls and the total ranges selected were diverse amongst both boys and girls. Again, though, because this study is not specific in its findings, it is difficult to say how broad or narrow the choices were.

Dreher and Juel noted that struggling readers avoid reading (26). Dreher also noted that children who make broader reading choices are more likely to succeed academically (33). Since there were no Level I and few Level II readers, this study's sample did not include any truly struggling readers. There was also no distinct pattern

found related to reading ability and total books checked out. In addition, as mentioned already, it is impossible to know how broad or narrow the choices were because only the Dewey ranges were available.

*Summary*

In general, this study's findings were in line with previous research. The major patterns found – that girls checked out more books than boys, girls checked out more Fiction than boys, and girls checked out more Fiction than Non-Fiction – are consistent with patterns found in similar studies to date. In addition, the major research question of this paper addressed differences in reading preference related to reading ability: Is a child's reading ability related to his/her reading preferences? While this study did not find a strong pattern in relation to girls and reading ability, it did find that lower performing boys in both the 3$^{rd}$ and 4$^{th}$ grades checked out more Non-Fiction than higher performing boys.

*Conclusions*

It's important to keep in mind that the patterns found in this or any other study cannot be pegged on an individual child whose interests are always unique and specific. What this study and other research like it can do, however, is point to trends that educators, librarians, and child psychologists can generally use to respond to elementary children. The often-reached implications of these studies suggest advocating *freedom* in children's reading choices. What does this mean to educators? Classroom teachers, children's librarians, literacy specialists, and child psychologists,

will find these results meaningful in considering how to best approach fostering an interest in reading.

For example, the trends found in this study and other studies like it, could help an elementary school librarian create an inclusive collection that targets readers of different abilities and interests. They could guide a classroom teacher in utilizing a variety of reading materials in his/her lesson planning. Or they could help a literacy specialist gauge the influence of a weak reader's reading preference on his/her reading development and expand the reading materials available for this reader.

Research has found a notable connection between the relatively poor literacy performance of boys compared to girls both in school and on standardized achievement tests. The alarm over this "gender gap" has prompted much research and discussion over the causes and the possible remedies. These studies have included an attempt to explain the discrepancy by examining children's reading preferences; specifically, if there is a difference in the reading habits and choices of boys and girls and how these habits change over time – particularly, once these students enter middle school.

While much research has considered these variables of age and gender, few studies have looked at reading ability as a variable. Further, few have considered the importance of non-fiction books in promoting literacy and academic achievement. Those studies that have looked at reading ability have found interesting trends. These trends are often contradictory; the consensus, however, is not. Children with different reading abilities exhibit different reading *preferences*.

Research regarding children's reading preferences of children has been conducted for years. Varying methodologies, purposes, and outcomes have all been used to study this topic. This research has and can be used to inform educators on the influence of age, gender, and reading ability on children's reading preferences. What this study hopes to achieve, then, is a contribution to previous and future research exploring children's reading preferences in relation to reading ability.

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**Appendix A:**

**SECOND GRADE**

| Gender | Fiction | Nonfiction |
|---|---|---|
| Male    n= 26 | 51 | 28 |
| Female  n= 37 | 127 | 61 |
|  | N= 178 | n= 89 |

**THIRD GRADE**

| Gender | Fiction | Nonfiction |
|---|---|---|
| Male    n= 43 | 36 | 55 |
| Female  n= 49 | 102 | 59 |
|  | N= 138 | n= 114 |

**FOURTH GRADE**

| Gender | Fiction | Nonfiction |
|---|---|---|
| Male    n= 34 | 85 | 46 |
| Female  n= 29 | 129 | 45 |
|  | N= 214 | n= 91 |

**Appendix B:**

| Grade | Fiction | Nonfiction |
|-------|---------|------------|
| Second Grade  n= 63 | 178 | 89 |
| Third Grade    n= 92 | 138 | 114 |
| Fourth Grade  n= 63 | 214 | 91 |
|  | Total=530 | Total=294 |

**Appendix C:**

**THIRD GRADE BOYS**

| Reading Assessments | Fiction | Nonfiction |
|---|---|---|
| Level 2   n= 1 | 0 | 0 |
| Level 3   n= 13 | 28 | 32 |
| Level 4   n= 24 | 8 | 15 |
| | N= 36 | N= 47 |

**THIRD GRADE GIRLS**

| Reading Assessments | Fiction | Nonfiction |
|---|---|---|
| Level 2   n= 4 | 15 | 4 |
| Level 3   n= 17 | 31 | 27 |
| Level 4   n= 18 | 52 | 26 |
| | N= 98 | N= 57 |

**FOURTH GRADE BOYS**

| Reading Assessments | Fiction | Nonfiction |
|---|---|---|
| Level 2   n= 0 | | |
| Level 3   n= 8 | 16 | 18 |
| Level 4   n= 22 | 65 | 28 |
| | N = 81 | N= 46 |

**FOURTH GRADE GIRLS**

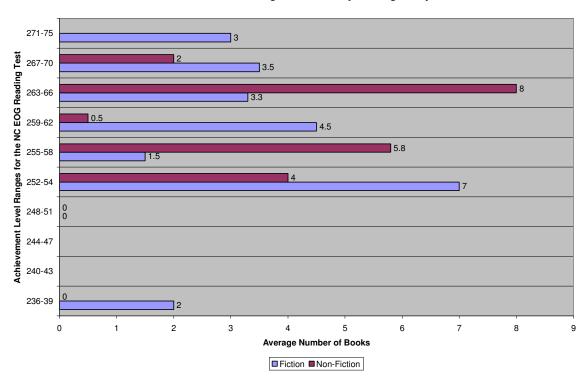| Reading Assessments | Fiction | Nonfiction |
|---|---|---|
| Level 2   n= 1 | 2 | 0 |
| Level 3   n= 2 | 7 | 4 |
| Level 4   n= 20 | 61 | 39 |
| | N= 70 | N= 43 |

**Appendix D:**
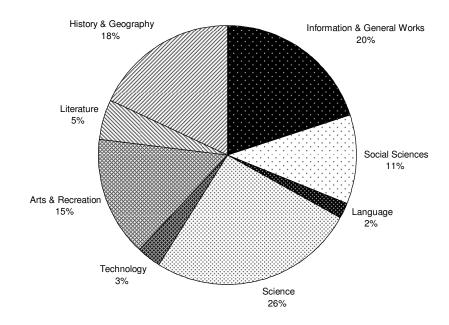
**3rd Grade Girls: Reading Preference by Reading Ability**



**4th Grade Girls: Reading Preferences by *Reading Ability***

**Appendix E:**
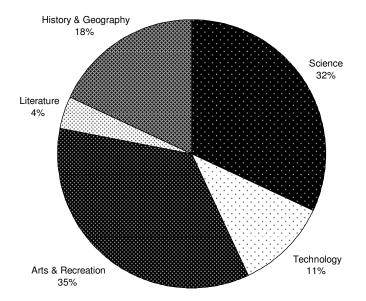
**2nd Grade Girls: Non-Fiction Check Outs**

History & Geography
18%

Information & General Works
20%

Literature
5%

Social Sciences
11%

Arts & Recreation
15%

Language
2%

Technology
3%

Science
26%

**2nd Grade Boys: Non-Fiction Check Outs**

**3rd Grade Girls: Non-Fiction Check Outs**



Gen Info 3%
Social Sci 2%
Lang 2%
Science 30%
Technology 12%
Arts & Recreation 22%
Literature 7%
History & Geography 22%

**3rd Grade Boys: Non-Fiction Check Outs**



History & Geography
5%

Information & General Works
30%

Arts & Recreation
23%

Social Sciences
2%

Technology
5%

Science
35%

**4th Grade Girls: Non-Fiction Check Outs**

History & Geography
11%

General Information
11%

Religion
2%

Literature
7%

Science
31%

Arts & Recreation
29%

Technology
9%

**4th Grade Boys: Non-Fiction Check Outs**



Pie chart showing: History & Geography 7%, Lit 2%, General Information 9%, Soc Science 4%, Science 44%, Technology 4%, Arts & Recreation 30%

**Appendix F:**

# DEWEY DECIMAL SUMMARY

## Hundred Divisions

| | |
|---|---|
| 000 Computer science, knowledge & systems | 500 Science |
| 010 Bibliographies | 510 Mathematics |
| 020 Library & information sciences | 520 Astronomy |
| 030 Encyclopedias & books of facts | 530 Physics |
| 040 [Unassigned] | 540 Chemistry |
| 050 Magazines, journals & serials | 550 Earth sciences & geology |
| 060 Associations, organizations & museums | 560 Fossils & prehistoric life |
| 070 News media, journalism & publishing | 570 Life sciences; biology |
| 080 Quotations | 580 Plants (Botany) |
| 090 Manuscripts & rare books | 590 Animals (Zoology) |
| | |
| 100 Philosophy | 600 Technology |
| 110 Metaphysics | 610 Medicine & health |
| 120 Epistemology | 620 Engineering |
| 130 Parapsychology & occultism | 630 Agriculture |
| 140 Philosophical schools of thought | 640 Home & family management |
| 150 Psychology | 650 Management & public relations |
| 160 Logic | 660 Chemical engineering |
| 170 Ethics | 670 Manufacturing |
| 180 Ancient, medieval & eastern philosophy | 680 Manufacture for specific uses |
| 190 Modern western philosophy | 690 Building & construction |
| | |
| 200 Religion | 700 Arts |
| 210 Philosophy & theory of religion | 710 Landscaping & area planning |
| 220 The Bible | 720 Architecture |
| 230 Christianity & Christian theology | 730 Sculpture, ceramics & metalwork |
| 240 Christian practice & observance | 740 Drawing & decorative arts |
| 250 Christian pastoral practice & religious orders | 750 Painting |
| 260 Christian organization, social work & worship | 760 Graphic arts |
| 270 History of Christianity | 770 Photography & computer art |
| 280 Christian denominations | 780 Music |
| 290 Other religions | 790 Sports, games & entertainment |
| | |
| 300 Social sciences, sociology & anthropology | 800 Literature, rhetoric & criticism |
| 310 Statistics | 810 American literature in English |
| 320 Political science | 820 English & Old English literatures |
| 330 Economics | 830 German & related literatures |
| 340 Law | 840 French & related literatures |
| 350 Public administration & military science | 850 Italian, Romanian & related literatures |
| 360 Social problems & social services | 860 Spanish & Portuguese literatures |
| 370 Education | 870 Latin & Italic literatures |
| 380 Commerce, communications & transportation | 880 Classical & modern Greek literatures |
| 390 Customs, etiquette & folklore | 890 Other literatures |
| | |
| 400 Language | 900 History |
| 410 Linguistics | 910 Geography & travel |
| 420 English & Old English languages | 920 Biography & genealogy |
| 430 German & related languages | 930 History of ancient world (to ca. 499) |
| 440 French & related languages | 940 History of Europe |
| 450 Italian, Romanian & related languages | 950 History of Asia |
| 460 Spanish & Portuguese languages | 960 History of Africa |
| 470 Latin & Italic languages | 970 History of North America |
| 480 Classical & modern Greek languages | 980 History of South America |
| 490 Other languages | 990 History of other areas |