# School library circulation records: What do they reveal about boys' reading preferences? 

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# School library circulation records: What do they reveal about boys' reading preferences? 

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#### Abstract

The purpose of this study was to examine what if any patterns emerge in the library checkout habits of elementary school age boys in consecutive grades and to compare them to common assumptions of which books boys prefer to read. A quantitative bibliometric method was used to analyze and count the circulation records of forty-four students over a three year period. The circulations to the boys in the study were compared to the circulations to the girls. Records revealed that on average, boys in third grade borrowed more books than the girls in the study, but girls selected more books than the boys in fourth and fifth grades. Both the boys and girls in the study borrowed substantially higher percentages of "stories" than "informational" texts. Boys selected more graphic novels and fiction chapter books in a series than girls did at all three grade levels examined.


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## by <br> Chelsea Sims

May 2012

This Research Paper by: Chelsea Sims

Titled: School Library Circulation Records-What Do They Reveal About Boys' Reading Preferences?
has been approved as meeting the research requirement for the Degree of Master of Arts.

Date Approved
Graduate Faculty Reader

Date Approved
Graduate Faculty Reader

Date Approved
Head, Department of Curriculum and Instruction


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## CHAPTER 1

## INTRODUCTION

Boys do not like to read. Just ask their teachers, librarians and parents. If one of these well-meaning adults does manage to get a book in a boy's hand it must either be really short, nonfiction, or a comic book. But are these common stereotypes about boys as readers really true? Are the reading habits of boys significantly different from the reading habits of girls? If the stereotypes are in fact myth, what can teachers, librarians and parents do to dispel the rumors and defend boys and their reading habits?

## Stereotypes about boys as readers

Assumptions about what boys do and do not read are not limited to the realm of education. The issue has had much attention in mainstream news publications, magazines and blogs. An internet search for "boys as readers" yields results for sites aiming to "empower boys to read," "turn boys into readers," or offer lists of "books for boys and reluctant readers," each implying boys are not as naturally inclined to read as girls may be, and many boys could be lumped in with "reluctant readers" of all types. Many of these sites, like librarian Mike McQueen's (2011) blog "Getting Boys to Read," go further to explain why boys need encouragement and what types of books will appeal to boys. McQueen lists as fact a few of the most commonly expressed stereotypes about boys as readers in a post titled "Getting Boys to Read - Quick Tips for Parents, Librarians and Teachers": (a) boys prefer to read nonfiction over fiction, (b) boys prefer reading that is short, and (c) boys prefer reading magazine articles over other types of reading. Additional stereotypes prevalent even in professional library publications include that "boys read comic books, baseball cards and cereal boxes. They are less likely to read books..." (Sullivan, 2004). McQueen's and Sullivan's assertions are supported by author and
former National Ambassador for Young People's Literature Jon Scieszka. Scieszka's (2008) advocacy website, GuysRead.com, offers statistics demonstrating boys' "trouble" with reading, suggests reasons why the trouble exists, and finally details the Guys Read mission which contains the plea to "include boy-friendly nonfiction, humor, comics, graphic novels, actionadventure, magazines, websites, audiobooks, and newspapers in school reading. Let boys know that all these materials count as reading" (para. 3). This mission statement implies that boys prefer reading material that differs from what girls or adults would deem "real reading," and suggests that certain genres are more "friendly" to one gender than another.

In May 2011, author Charles London wrote in The Huffington Post about his own past as a "boy reader" who used to prefer TV and videogames over reading books. As a child, London considered himself "not a reader" and yet later came to recognize that he was "hungry for stories" and sought them out in places that weren't "teacher-approved." As Scieszka (2008), Sullivan (2004) and McQueen (2011) before him, London espouses several of the same assumptions about boys: boys prefer nonfiction, short works like magazines, and comic books more than other types of reading.

Trusted professional sources for teacher librarians also reflect these assumptions about boys as readers. School Library Journal published "Why Johnny Won't Read," in which Sullivan (2004), much the same as London (2011), claims that boys do read, just not what their parents or teachers want them to read. Sullivan states "boys read comic books, baseball cards, and cereal boxes. They are less likely to read books; and when they do, they often don't read the ones we want them to" (p.36). Sullivan goes on to cite various studies defending the theory that these preferences are due to boys' "internal-wiring," a lack of male role models reading, and the failure of teachers and librarians to connect boys to books they will enjoy.

School Library Journal's September 2007 cover story "The Boy Problem," detailed the widening achievement gap between boys and girls in public schools. The gap between girls and boys in reading for pleasure, Sax (2007) asserts, has widened so much that "it has become 'a marker of gender identity...Girls read; boys don't'" (p. 42). Research supports Sax's assertions that boys have lower reading skills, read less often and have a more negative attitude toward school than girls (Logan \& Johnston, 2009). To remedy the "boy problem," Sax suggests an overhaul of expectations for boys including teaching them to read later, letting them make noise during story time, and realizing the definition of masculinity has changed over the years. The belief that boys do not read, or at least not as widely as girls do, is pervasive and supported by enough research to make stereotypes about boys' reading preferences easy to believe.

Since girls began to earn higher scores than boys on reading tests like the National Assessment of Educational Progress in the late 1990s, rarely have girls been singled out as requiring special book collections or exceptional encouragement from adults to read. An internet search for "girls as readers" leads to no results that claim girls need help to become readers, but produces links to all-girl book groups, recommendations for "Urban Girl" readers, and a great many book reviews aimed at female readers. There is no "Girl Problem" with reading, and girls seem to be free from a gender-determined preference for certain types of books.

## Problem Statement

Education professionals, parents and the media have made assumptions about boys' reading preferences which may not be accurate.

## Purpose Statement

The purpose of this research is to develop an understanding of the library checkout habits of boys in consecutive grades of elementary school and to compare them to existing perceptions of what books boys select.

## Hypothesis 1

Circulation records will reveal that the difference between average circulations to boys from grade 3 to grade 5 was no more than one book per child fewer than girls in the population studied.

## Hypothesis 2

Circulation records will reveal that on average boys and girls in the population studied select more fiction than nonfiction overall.

## Hypothesis 3

Circulation records will reveal that on average boys and girls in the population studied select similar numbers of graphic novel and comic book titles.

## Hypothesis 4

Circulation records will reveal that on average boys and girls in the population studied select a similar percentage of fiction titles which are part of a series.

## Assumptions

This author assumes that school library circulation records provide an accurate indicator of reading preferences of elementary school children.

## Limitations

This study will be limited to the population of one school during a specific time frame, and therefore to the library collection available from which students may select. The students in
this study did not have unlimited resources, topics and ideas from which to choose their books. A student's checkout history may not indicate what books are actually read start to finish, only the books that are selected within a certain timeframe under specific circumstances. The study will not include books selected from other sources outside the school library and therefore will not provide a comprehensive list of what elementary school children read.

## Significance

Assumptions about boys as readers may have a lasting and damaging effect on boys' emotional relationship to reading, potentially leading boys to disengage with reading entirely and further widen the achievement gap between girls and boys in school. In Educational Psychology, Woolfolk (2004) describes "stereotype threat," the fear of confirming a negative stereotype, and how the phenomenon can affect student performance and behavior. Woolfolk points to the longterm effects of stereotype threat, namely psychological "disidentification." After exposure to stereotype threat, students may disidentify, or disengage from the "risky" activity and distance themselves in order to protect their self esteem or emotional state. If negative stereotypes about boys persist, generations of boys are at risk for disidentification as readers, cutting them off from opportunities for independent learning and reading for pleasure throughout life. Many believe the definition of masculinity has been changing to exclude reading as an appropriate activity for boys (Johnson \& Greenbaum, 1980). One Canadian study by Cherland (1994, as cited in McKechnie, 2006) found that many parents did not feel reading was appropriate for boys and some fathers denied their sons ever read any fiction. Disidentification could lead to a society which denies boys an acceptable way to learn from and enjoy reading.

If we in education accept that boys do in fact read differently than girls, many policy and selection decisions may be affected. This study will add to understandings about boys' reading
preferences and our own assumptions. School Library Journal blogger Marc Aronson (2008) wrote:

The real problem [is] in how we speak about boys and reading: we know so little about it that we do not have a good typology of the spectrum of boy reading, in all its variables (....) We need to break down the big category of "young reader" into its many subcategories, and then begin to see what characterizes each. Otherwise we are just shifting around our mythologies, substituting one set of memories merged with observations for another. (para. 3)

By studying the actual checkout patterns of elementary students, librarians, teachers and parents can be made aware of which, if any, of the commonly existing stereotypes about boys' reading habits are based in truth and which can be disregarded as myth. The findings of this study can help guide teacher librarians and other adults purchasing books for both boys and girls in selecting books of interest, as well as create an awareness of the influence stereotypes may have on the selections boys make for themselves. As advocates for free access to information, librarians especially have a responsibility to avoid placing limitations and expectations on the choices children make about reading.

## CHAPTER 2

## LITERATURE REVIEW

The purpose of the current study is to examine the school library circulation records of elementary students in order to compare boys' checkout habits to existing assumptions about their preferences. The research will examine whether boys choose fewer books than girls overall, whether they choose nonfiction over fiction more frequently than girls, and whether boys choose certain types of books like graphic novels and magazines over chapter books more often than girls. Previous research surrounding this issue falls into two main categories: attitudes toward reading as a gendered activity and the reading habits and preferences of boys.

## Reading as a Gendered Activity

Several studies have indicated the perceived differences in the reading habits of boys and girls can be related to the attitude that reading is a feminine activity. McKenna (1997) explored this notion among children. The researcher hypothesized that children in grades kindergarteneighth would "regard reading as a predominately feminine activity" and administered a survey to 269 students in a low income urban school. Separate surveys were used for students in grades K3 students grades 4-8, but both Downing Object Opinion surveys consisted of a list of activities the students were to identify as masculine or feminine (p. 3). No third option was available, but if a student did not respond it was scored as "non-committal." McKenna compiled responses and found the "overall majority of students throughout grades K-8 see reading as an activity more suitable for girls" with the number increasing most dramatically around the fifth grade (p. 4). When results were split between genders, girls unanimously thought of reading as a girl activity beginning in fifth grade. Boys also thought of reading as a feminine activity, but not as strongly
as the girls. McKenna's study was limited by the lack of an option to select "both" or "either" in response to an item, possibly forcing participants to make an inauthentic choice.

Rather than ask students to identify reading as masculine or feminine, Dutro (2002) examined the concept of what 26 fifth grade students perceived to be "girl books" or "boy books." Dutro visited one classroom in a predominately African American Midwestern suburban school two or three times a week for an entire school year to participate in and observe literature activities. Weekly discussions and individual and group interviews were audiotaped. Analysis of data collected from tapes and from a "forced choice" experiment in which students had to choose from a limited number of books in a series showed that both boys and girls had clear definitions of which books were appropriate for their gender. Boys and girls described boy books as "adventurous, scary and sports centered" and girl books as having the color pink or illustrations of girls on the cover and a presumed theme that centers on girls' experience (p.382). Dutro found that girls were usually comfortable choosing books they identified as boys books, but boys were often ridiculed by their peers if they chose or were forced to choose what was considered a girl book.

Since the 1980s, researchers have explored the relationship between boys' success in school and the number of female teachers at the elementary level (Johnson \& Greenbaum, 1980). Katz, Sokal, Chaszewski and Wojcik (2007) studied the effect of male and female teachers on reading abilities and the view of reading as masculine or feminine. Katz, et al. studied a diverse group of 180 Canadian boys identified as struggling readers in third and fourth grade. Student reading competence was tested by the Alberta Diagnostic Reading Program informal reading inventory and perception of self as a reader was tested by a five-point Likert-scale survey. Boys worked on reading skills one-on-one with either a male or female research assistant (RA) for ten
weeks. The boys also classified a set of pictures into the categories of "usually done by girls, usually done by boys or usually done by both boys and girls" (p. 654). Descriptive analysis found that $6 \%$ of boys viewed reading as masculine, $9 \%$ viewed reading as feminine and $86 \%$ viewed reading as gender-neutral. Variance analysis was conducted for data collected pre-study and post-study with RA's gender as the independent factor. The researchers found no significant effect from the RA's gender on reading performance or perception of reading as masculine or feminine. However, researchers did find boys who worked with female RAs showed more positive results in self-perception as readers. Findings did not support the assumption that lack of male teachers effects boys' reading competence, and did not support the assumption that boys view reading as a feminine activity.

Studies have provided contradictory evidence surrounding the perception of reading as being an activity more appropriate for girls than for boys. The concept of "girl books" and "boy books" is largely accepted in the literature and has led to many studies on differences in reading preferences between boys and girls.

## Reading Habits and Preferences of Boys

Many studies have been completed over the past 50 years about the reading interests, preferences and habits of boys. Most researchers have agreed that girls and boys choose different types of reading (Chiu, 1973; Feeley, 1982; Kropp \& Halverson, 1983; Simpson, 1996). However, when attempting to determine which types of books boys and girls prefer, the findings are inconsistent. An early study by Stanchfield (1962) examined 153 boys in grades 4, 6, and 8 from a variety of socio-economic levels and IQs in Los Angeles. The focus of Stanchfield's study was not to compare boys' interests to those of girls, but to compare reading ability to interest in order to help teachers encourage lower-achieving boys to succeed in school.

Interviews were conducted to determine which of 50 categories the boys were most interested to learn about. Among the findings was that the most highly preferred of all categories was "outdoor life" followed closely by "exploration and expeditions" and "sports and games" (p. 42). Also of interest were science fiction, sea adventures, fantasy, historical fiction and humor. Stanchfield concluded that boys preferred "exciting, suspense-filled, dramatic stories with emotionally charged vocabulary" (p 44). Stanchfield, like Clarke (1969) seven years later, was concerned with lower-level readers feeling "hostility and defensiveness" and the "apparent cumulative effect of frustration in not being able to read up to grade level" (p. 44). The "boy problem" with reading had begun.

Clarke's (1969) seminal reading study was also concerned with the relationship between reading skills and children's "voluntary reading behavior." Clarke distributed self-administered questionnaires to 381 ninth and tenth grade boys randomly sampled from three Seattle public school districts. Like Stanchfield's (1962) work, the study did not seek to determine differences between habits of boys and girls, rather surveyed only boys because "the sex limitation was dictated by research costs" (p. 4). Clarke compared the use of print materials by teenage boys with high reading skills to those with low reading skills as measured by the Davis Reading Test. Factor analysis of data revealed "surprisingly low" correlation between comprehension and amount of book reading (p. 75). Clarke reported that boys with "low comprehension" still read books for leisure, though their reading choices differed from those of the boys with higher ability. Of boys in the top quartile, $24 \%$ read science fiction and $10 \%$ read "speed and violence" books, while of boys in the bottom quartile $13 \%$ read science fiction and $50 \%$ read "speed and violence" books. Echoing Stanchfield, Clarke suggested low readers were more likely to choose violent books "partly because of frustrations resulting from deficient verbal abilities," and "may
be generally more hostile and aggressive than good readers" (p. 77). Among Clarke's conclusions was that teachers may need to "start poor readers on a diet of aggressive (and even sexual?) materials to convince them that print can be rewarding" and they may be successful in transitioning sports fans to sports novels and newspaper/magazine readers to nonfiction works (p. 83). Clarke stated "the educational game being outlined here is one of luring a youngster into voluntary exposure to print materials..." (p. 83). It is clear that Clarke's findings have reverberated in the education world for decades as the suggestion that boys must be enticed to read what we would deem as appropriate is still circulated widely.

Meisel and Glass (1970) continued the trend of studying the interests of boys, but added the element of comparison to girls' interests. The researchers categorized library books and basal readers into 42 interest areas and studied the interests and habits of the students in Meisel's own fifth grade class over a five month period. Students first ranked the categories they found most interesting; then the researchers compared the most popular categories to the contents of the basal readers used in classroom. The most popular interest categories for boys included history and geography nonfiction, biography, careers, science, animal nonfiction and sports fiction. Among girls, the most popular categories were personal adventure, humor stories, fantasy, biography, animal fiction, and mystery. Findings demonstrated that the top categories by both boys and girls were rarely found in the basal readers. Relevant to the current study, Meisel and Glass are among the first researchers to put forward that boys prefer nonfiction over fiction.

Chiu (1973) tested the hypothesis that girls and boys choose different types of books by administering a survey to 99 fourth grade students from two rural elementary schools in Indiana. Students chose from two descriptors in a series of questions asking "would you rather read..." (p. 370). The survey was administered twice over a one month period and results were tabulated
to determine which categories were preferred by boys and girls. As a group, boys' top five preferences in order were sports, biography, mystery, social studies and science Girls' top five were mystery, humor, adventure, biography, and animal stories. The hypothesis that girls and boys have differing preferences was confirmed. Note that among the top five preferences of boys are categories that could be fiction or nonfiction, but, with the exception of mystery, could all be construed as "informational" texts-a preference suggested in Meisel and Glass's study (1970).

Feeley (1982) sought to replicate an earlier study of fourth and fifth grade students reading and media choices (Feeley, 1972 as cited in Feeley, 1982). The study asked students from an urban school in New Jersey to complete a Likert-type inventory to rank various types of content and whether they would prefer to watch, read, or watch and read the content. Factor analysis of the data showed that girls and boys continued to have different interests, but the patterns in girls' interests changed between 1972 and 1979. Interest in sports increased for girls, and interest in "media" increased for boys and girls alike. Geographical considerations showed "suburban boys indicated a significantly greater preference for reading the sports and historicaladventure clusters than did the urban boys" (p. 14). Boys' interest in informational content ranked second or third in the reading category as it did in the 1972 study. Feeley suggested teachers and librarians "supply boys with historical-adventure and informational sources, especially in the sciences" (p. 15). Like Meisel and Glass (1970), and Chiu (1973) Feeley's research encouraged the notion that boys prefer nonfiction to fiction.

Wolfson, Manning and Manning (1984) compared their results to a similar study by Wolfson in 1960. The 1984 study examined the reading interests of boys and girls as measured by a 120 question inventory. The 415 fourth grade students from Alabama responded "yes", "no" or "don't know" to questions asking whether they would be interested in reading a story about
certain subjects or characters. The frequency of the responses was calculated and comparisons were made between boys and girls using the Sign Test. A difference of four or more responses was considered to be a "considerable difference" by the researchers. Analysis demonstrated no statistically significant differences from the previous Wolfson (1960) study or between the interests of boys and girls. However, Wolfson, et al. (1984) did find several "considerable differences" among interests of boys and girls. The categories of adventure, machines and applied science, and animals were more interesting to more boys than to girls, and more girls than boys were interested in multi-ethnic, family life and children, and fine and applied arts stories. There were many overlaps in interests in both the 1960 and 1984 study, with almost no difference in the number of boys and girls who were interested in fantasy, sports, social studies, famous people and plants. The researches concluded that although there were differences in the interests of boys and girls, "educators should not constrain book choices of boys and girls [....] It is important to avoid stereotyping one type of book for boys and another type for girls" (p. 9).

Two studies in 1985 examined the "gender gap" in what boys and girls choose to read. Childress (1985) was interested in how Freud's latency period theory relates to what boys and girls choose in the library. Childress connects the latency period to explaining why "boys choose informational books to fulfill their inborn drive toward mastery of the external world" and "girls innately turn to fictional works to understand the complexities of human relationships" (p. 69). Childress cites only her own experiential evidence of this phenomena and an earlier informal experiment involving her kindergarten and first grade students to support these claims. The study that followed took place over eighteen weeks and involved observation of choices made by students from a pre-selected set of sixty books put out on library tables. Childress compiled the results and found that kindergarten and first grade boys "chose nonfiction and fiction with almost
equal frequency" but girls selected fiction between $79-80 \%$ of the time (p. 71). Childress' sweeping conclusions do not seem to reflect the data collected. Kindergarten boys selected fiction $50.3 \%$ of the time and nonfiction $49.7 \%$ of the time, and first grade boys selected fiction $40.1 \%$ of the time and nonfiction $59 \%$ of the time, but Childress construes these small differences as confirmation "that boys tend to prefer informational books" (p. 71). More notable in the results was the overwhelming preference for fiction among girls, and that boys were less predictable in their choices.

Another 1985 study by Bard and Leide examined five years of elementary school library circulation records to determine if circulation patterns differed between grades and genders. The researchers examined records of children from one Hawaiian elementary school and categorized reading selections as Imaginative Literature, Realistic Fiction, Mysteries or Information Books. Using chi-square, differences among grade levels and gender were determined. The findings most relevant to the current study showed that "significantly more realistic fiction and imaginative literature in the sample circulated to girls" and "significantly more information books in the sample circulated to boys than to girls" (p. 122-123). Important to note, however, total circulation of information books was only $22.98 \%$ of all books circulated, leaving the remaining $77.02 \%$ of books circulated in the category of fiction. At every grade level, boys selected more fiction than nonfiction when totaled across categories. Incautious reading of Bard and Leide's study could have contributed to the growing belief that boys prefer nonfiction over fiction.

Haynes and Richgels (1992) critiqued earlier studies of children's' reading preferences for lack of scientifically rigorous methods. The researchers sought to investigate preferences of 523 boys and girls in fourth grade using factor analysis. Students from eight school districts
randomly selected from four states completed surveys detailing if they would read fictitious titles or not based on annotations. Using factor analysis allowed for preference patterns to emerge that did not fit the original categories assigned by the researchers. Analysis found the three topranked categories for boys and girls were drawn from fantasy, realistic fiction, historical fiction, scientific items and biographies. As in previous studies, Haynes and Richgels concluded "boys' preferences were more diverse than the girls' preferences" (p. 216). Traditional categories based on genre proved to be less useful in determining gender differences than content categories.

Wicks' (1995) purpose was to investigate the reading preferences of teenage boys. Wicks administered one-to-one structured interviews to a stratified sample of 60 boys age 13-15 of various reading abilities from four secondary schools near London. Responses to interview questions were compiled and analyzed to find percentages of boys reporting common habits. Because Wicks only examined reading habits over a ten week period, the results of the study are limited, but many of the findings contradict studies from the 1970s and 80s. Wicks found that almost all of the boys read fiction, $88 \%$ read nonfiction and magazines, $52 \%$ read picture books and only $45 \%$ read comics. Fiction was read most regularly, and nonfiction was read between weekly and monthly. One-third of all of the books read by the boys in a ten week period were books in a series or by an author the boys had read before. Wicks concluded that teenage boys read a wide variety of books, with a relatively low use of nonfiction. Again, the argument that boys read a variety of genres was supported.

The results of a 1996 study were more inconclusive. Simpson (1996) investigated the reading behavior of children and the role of the teacher in "supporting or challenging these reading practices" (p.269). Simpson studied a class of 30 children age ten to 12 in a suburban Australian school using a teacher-created interest questionnaire, student reading logs, informal
discussions and informal experiments. Analysis of reading records revealed that $90 \%$ of books read by girls in a four week period were narrative fiction, $53 \%$ of books read by boys were novels (half of which were Choose-Your-Own-Adventure) and $47 \%$ were nonfiction, comic books, joke books or picture books. Simpson found that girls "completed" nearly twice as many titles as boys. Simpson pointed out that nonfiction books were rarely the focus of the curriculum with the exception of a "project" in which students chose their own topic. Following project choices, Simpson set up an informal experiment in which students were permitted to choose from 60 nonfiction titles to take back to the classroom to explore. Simpson found that boys chose their books more quickly than the girls and that the girls were less likely to be satisfied with the available subjects. Seven girls were unable to find a book of interest although 40 books were presented. Simpson was most concerned that girls had such limited interests, choosing mostly fiction. Boys tended to read a variety of books, fiction and nonfiction almost equally. Simpson's study is not without limitations; the small sample, four week time period and informal methodology leave much to be learned about differences in the reading habits of boys and girls.

A later and more thorough Australian study by Barry and Meirs (1998) investigated the reading habits, attitudes and interests of 210 twelve to sixteen year-old boys attending Scotch College boarding school. Among the objectives of the study was "gathering evidence of the reading interests of students" (p. 8). Using a combination of a survey of all 210 students and interviews of five boys at each grade level, the researchers collected a great deal of data which was then analyzed by the Australian Council for Educational Research. Among the findings were that on average about half of all students read newspapers "often," $40 \%$ read magazines "once a week," and 20\% read magazines daily. Barry and Meirs found by Year 10, the number of novels read in a year decreased greatly, with $40 \%$ of students reading fewer than five. The most popular
genres of fiction were Adventure/Survival and Science Fiction/Fantasy. Over half of students reported enjoying poetry sometimes or always, but $42 \%$ reported not enjoying poetry at all. Nonfiction was overwhelmingly reported as "never or hardly ever" read at all grade levels with an exception for sports and recreation books. The study showed that $66 \%$ of the boys in grades 7 10 at Scotch College enjoyed reading for pleasure regularly, and $88 \%$ enjoyed reading for pleasure monthly. As in the study by Wicks (1995), the notion that boys prefer to read nonfiction over fiction was not substantiated.

Widening achievement gaps between boys and girls in reading measured by the National Assessments of Educational Progress during the late 1990s may have created renewed interest in boys and what they read. By the beginning of the twenty-first century, there was still no consensus on the reading preferences of boys. Since that time, more long-term, in-depth studies have been conducted to attempt to tackle the growing "boy problem" of underachievement and disengagement with school (Sax, 2007).

In 2002, the notion of what should be considered "real reading" began to re-emerge in the literature, harkening back to Clarke's (1969) idea that boys needed to be persuaded to read the right kinds of books. Smith and Wilhelm (2002) explored different kinds of literacy via in-depth case studies of 20 high school age boys in "Reading Don't Fix No Chevys": Literacy in the Lives of Young Men. The authors worked in four schools in three states to profile boys from a variety of backgrounds, ethnicities, and skill levels. Smith and Wilhelm's overall goal was to determine if gender is a useful category for teachers to use when thinking about teaching and learning. Among the research questions was "how the boys in our study valued different kinds of activities, and how literate activities fit in to their overall values" (p. xxi). Among the varied methods used, the researchers conducted interviews and literacy logs to collect data about the
habits and attitudes of the boys in the study. Through discourse analysis of responses to literature and content analysis of the literacy logs, Smith and Wilhelm found most of the boys enjoyed texts that were short, highly visual, had a story with relatable characters, and were actionoriented and/or humorous. The researchers found the boys made meaningful connections with a variety of texts, but rarely with the short stories and novels traditionally used in the high school classroom. Rather, boys became most engaged in reading when it was to solve a problem of personal interest to them. Smith and Wilhelm suggested the need to redefine literacy to include the multiple of types of texts the boys they studied engaged with - music, video, visual arts, and the internet. The idea that boys are literate but may not engage in texts teachers find valuable is one that recurred throughout studies during the 2000s.

Sturm (2003) investigated the reading interests of 2,000 children age two to eighteen in North Carolina. In order to discover what children were interested in when they entered the library and if the interests varied by gender, Sturm collected data from a statewide reading enrichment program titled "The Best Place to Start" which asked children to fill out a card with personal information and to answer the question "what would you like to know more about?" (p. 4). Two-thousand cards were randomly selected from the over 150,000 completed and were sorted by gender inferred from first names. Due to the open-ended nature of the question, responses were coded and categorized to create rankings. The most popular category by far for all respondents was animals, with little or no difference between boys and girls when subdividing by type of animal. Interestingly, the top four categories for both boys and girls were identical: animals, science, sports and literature. In the literature category, more children requested books by a specific author or in a series than by genre. Sturm concluded that the
children had a wide variety of interests and the preferences of boys and girls in the study showed little difference by gender.

A Canadian study by McKechnie (2006) profiled the reading habits of 43 boys between age four and twelve. McKechnie's purpose was to explore the "boy problem" from the perspective of boys themselves. A grounded theory analysis of inventories of books owned by the boys and semi-structured qualitative interviews led McKechnie to determine that all of the boys in the study had personal collections of reading materials, and all but one owned fiction. The boys' collections contained some genres that appeared more frequently, including fantasy, science fiction, sports stories, funny stories and books in a series. All but one of the boys owned nonfiction on a wide variety of subjects, most notably books with many illustrations like almanacs, Dorling Kindersley Eyewitness books, handbooks for games, magazines, and comic books. The boys also owned and discussed reading sticker books, coloring books, puzzle books, collection guides, and catalogs. The researcher noted that for many boys in the study, the nonfiction books they owned inspired the most enthusiasm. Interestingly, many of the boys interviewed did not consider what they liked to read to be "real reading." Because their favorites were not novels, several boys thought their choices were not appropriate to discuss with the researcher. McKechnie concluded that teachers and librarians need to expand what is considered "reading" to include the interests of boys, implying like Scieszka (2008) that teachers and librarians have long ignored boys' well-known preferences. As much of the research has shown, however, there is little consensus on what boys prefer.

Mohr (2006) attempted to discover reading preferences of boys and girls by studying first grade students. Among Mohr's research questions was: "are gender differences evident in the book choices, the selection rationales, and selection processes among first graders?" (p. 86). To
investigate this and other questions, Mohr selected nine high-quality current titles from which students could choose a book to keep. Mohr performed an experiment followed by interviews with 104 boys and 86 girls in first grade at a small school in the southwest United States. Students were given unlimited time to peruse and select one of the nine titles to keep. Selections were recorded, and interviews were conducted, coded and analyzed. Mohr found that the students in the study overwhelmingly chose the nonfiction titles, and $46 \%$ of the students chose the same title about animals. Boys chose nonfiction more consistently than girls and unlike previous studies girls demonstrated more variety in their choices than the boys, who almost exclusively chose the same nonfiction title about dangerous animals (Childress, 1985; Bard \& Leide, 1985; Simpson, 1996). Interviews showed boys and girls chose their books based on topic and/or pictures, but boys relied more on topic and girls more on pictures. Because this study only allowed students to choose from nine titles, the differences in selecting nonfiction over fiction may have been skewed by the fact that many of the titles included animals while others did not. Also problematic was the inclusion of a poetry title in the category of nonfiction, a classification which some assume only denotes "informational" books.

Brisson (2007) sought the opinions of five Canadian boys between 11 and 13 years-old to explore how various factors influence boys' reading choices. Brisson took a qualitative in-depth interview approach to determine the ways hobbies, peers, attitude toward reading and other factors influence a boy and his "path" toward becoming a reader. The boys were chosen from a convenience sample with no attempt to account for variables such as socio-economic status, ethnicity or academic ability. One-on-one interviews composed of open-ended questions were conducted first, followed by a group interview. Interviews were transcribed, coded and categorized for comparison with the research questions. Among Brisson's findings was that
although a great deal of research has presented boys as reluctant to read fiction, the five boys in the study were avid fiction readers. Many of the boys read as a hobby despite their friends not enjoying reading. Brisson found that boys enjoyed fiction books in a series, confirming the findings of other researchers (Smith \& Willhelm, 2002; Farris, Werderich, Nelson \& Fuhler, 2009). Brisson also found that although the boys did not view reading as a "girl" activity, they did express disinterest in "girl books" including books in the form of a diary, or tales of a girl and her pony. From Brisson's research, it appears the definition of girl books versus boy books does not fall along the lines of fiction and nonfiction.

A recent study also contradicted the assumption that boys do not choose fiction. Farris, Werderich, Nelson and Fuhler's (2009) purpose was specifically to discover the reading preferences of fifth grade boys. The authors worked with university students to complete a qualitative study of 16 fifth grade boys from a school-university partnership elementary school in the Midwest. University students paired with the boys to discuss their reading via e-mail dialogue journals between September and April. Additional data were collected via one-to-one interviews and informal discussions as well as field notes recorded by the researcher. Data were analyzed inductively using the Glaser and Strauss comparative method. Among the researcher's findings were that boys chose books in series because they enjoyed following a character through multiple stories, and that boys chose nonfiction books with short-passages and accompanying illustrations. Farris, et. al. also found that boys often chose books that "looked good" based on the cover alone, preferring books with action-oriented illustrations or unusual fonts. The researchers did not discover a significant preference for nonfiction over fiction.

Over the past fifty years, many studies have looked at the reading preferences of boys with inconclusive results. Clarke (1969) suggested boys need to be lured into reading with sports
fiction and short magazine articles, while studies in the 1970s and 1980s began to suggest, with questionable evidence, that boys prefer nonfiction reading over fiction. Studies in the 1990s began to question the methods of previous studies while finding that boys read a variety of genres, nonfiction and fiction, especially books in a series. Studies since the turn of the century have supported the notion that what boys prefer to read is not considered "real reading," and continued to show that boys do read fiction, especially books in a series. The only finding that has been agreed upon by most of the research was that differences do exist in the interests of boys and girls. Many studies show that boys read more nonfiction than girls do, but not necessarily more nonfiction than fiction. In reality, while girls seem to read a greater number of books, it seems boys read a much wider variety of books than girls. The sum of these findings raised the question of how it has become so widely accepted in current educational rhetoric that boys only read specific types of books.

## Summary

While research into the reading preferences and behavior of boys extends over some fifty years, the findings are less conclusive than prevailing assumptions about boys' reading might suggest. Research about boys and reading has investigated the attitude that reading is feminine and the differences between the reading interests of boys and girls without definitive results. Through various methods, researchers have explored populations large and small, but with only two exceptions (Feeley, 1982; Bard \& Leide, 1985), all of the studies examined the reading choices of students during one fixed point. Many of the studies depended on surveys using madeup titles with assumed genres or false categories created by the researcher, limiting the responses of the participants. The current study was longitudinal, unobtrusively examining the library circulation records of the same population of students over a three year period. The only
limitations on types of books chosen will be created by the library collection available and not by the researcher. The most recent studies have explored reading interests through interviews, but no study has looked at the actual circulation records of children since the mid-1980s. One possible reason for contradictory results in studies over the years may be found in the research methods, including the framing of categories of texts. By examining circulation records, rather than providing interest categories for choice by young readers, this study sought to avoid the potential weakness of analyzing preferences of specific topics or titles. Using a quantitative and objective bibliometric method to examine actual reading selections of students over a period of time, this study avoided weaknesses of previous studies and added current data to the existing body of research.

## CHAPTER 3

## METHODOLOGY

Despite hundreds of often contradictory studies about the reading interests of children, there are several stereotypes about the reading habits of boys that persist and may be inaccurate. In order to examine the accuracy of common assumptions about the reading interests of boys as compared to girls, this longitudinal study used a quantitative bibliometric approach to unobtrusively examine the circulation records of elementary students. Bibliometrics is a method described by Beck and Manuel (2008) as "...unobtrusive; its focus is upon the products of human activity (books, articles, Web pages, and so on), and not on the humans themselves" ( p . 167). This method allowed the research to focus on actual checkout habits rather than imagined categories or forced choices and thus eliminated some opportunities for subjectivity or bias on the part of the subjects or the researcher. By studying the complete circulation records of students over three years, data were less likely to be skewed by temporary interests or patron whim. Moss and MacDonald (2004) recommended the use of library circulation records as "unobtrusive measures of the use children make of the resources available over time. They are not intrinsically more reliable than other forms of data, but they do provide another window into children's reading" (p. 404).

Bibliometrics often attempts "to do no more than provide numbers (such as frequency counts or percentages) that help to illuminate the topics they are discussing" (Beck \& Manuel, 2008, p. 172) and therefore requires some baseline against which to measure results. To address this issue in the current study, the frequency of circulations by boys was compared to those by girls. Risk remained for researcher subjectivity in the interpretation of data as it had to be filtered through the lens of previous research. As bibliometrics focuses purely on counting the records
and not on the content of the individual books, the researcher assumed that based on call number and title alone, a book can be placed into a category which will reveal patterns about student reading interests.

## Procedure

The population for this study was chosen purposively from a single mid-sized urban Midwestern school district. The elementary school selected retained circulation records in order to assess certain student skills. In an attempt to control some factors that could affect the data, the chosen school had a population of approximately 680 and a low rate of transfer, providing a greater percentage of students who had been exposed to the same library collection, the same library curriculum taught by the same teacher and who shared similar school experiences. The school population was $87 \%$ white with $22 \%$ eligible for free or reduced lunch. The researcher did not know or teach any of the students in the study. Based on a preliminary exploration of data, 44 current sixth grade students, 29 boys and 15 girls, were chosen who had circulation records starting in August 2008 when students were in third grade. Students at this school were permitted to check out up to 5 books at one time. Using the school's circulation and collection management software Follett Destiny, one copy transaction data statistical report was run and exported for the each of school years that was studied. Irrelevant data and personally identifying information was removed and all names were replaced with a code that included the subject's gender and a number for comparison purposes. Data was sorted first by call number in order to find patterns from which to create categories for analysis. Appendix B is a complete list of categories and their descriptions. Next, data were sorted by subject code and the total number of books circulated for each gender were counted and compared for each of the three school years examined. Finally, circulations within the established categories were counted for each gender.

The mean frequency of circulation of nonfiction, fiction, graphic novels, poetry, folktales, picture books, biographies, and other categories of nonfiction by boys were calculated and compared to the selections of girls in the same grade to serve as a "baseline" and point of comparison. The mean for each category was determined by dividing the total number of circulations by the number of subjects in the study, 29 boys and 15 girls respectively. Analysis of the data compared the checkout habits of girls and boys and to determine which if any of the hypotheses about assumptions surrounding reading habits would be confirmed.

## CHAPTER 4

## FINDINGS

Although hundreds of studies over the past 60 years have investigated the reading habits of children, no consensus has been found on what types of books boys and girls prefer. Despite the often contradictory evidence, many assumptions exist about the reading habits of boys. Using a bibliometric method, the current study examined the school library circulation records of 44 children currently in sixth grade over the previous three years to see whether any patterns emerged and how those patterns compared to common assumptions.

Bibliometrics is a method in which books are counted, providing numbers from which conclusions may be drawn about a specific data set. The current study collected data from a single elementary school's library circulation records in the form of copy transaction reports generated from the library collection management software Follett Destiny. One report was created for each school year analyzed, when students were in third, fourth and fifth grade. Reports generated a total of 4,403 records for the 15 girls in the study and 8,614 records for the 29 boys. Preliminary analysis of the data yielded multiple categories based on call number and title (Appendix B) including fiction, nonfiction, graphic novels, poetry, traditional tales, subcategories of types of nonfiction as well as several fiction series which occurred frequently in the data. Data from the transaction reports were exported into a spreadsheet. Subjects were assigned codes, and circulations were sorted and counted to find the total number of circulations per student in the study. Mean number of circulations by each book category were calculated for each gender for each of the three years in the study. Important to note is that the unit of study is circulation of a book; hence, data collected include each time a book was circulated, even if it was circulated to the same student multiple times on different dates.

## Circulations by Gender

The study's first hypothesis addressed the assumption that boys do not read as much as girls. The hypothesis predicted that circulation records would reveal that the difference between average circulations to boys in the population would be no more than one book per child fewer than girls in the population studied. Figure 1 displays the average number of circulations by boys and girls for each of the three years in the study. When compared to the baseline set by average number of circulations to girls, boys' average annual circulations was greater in $3^{\text {rd }}$ grade, but lower in fourth and fifth. The data do not support the first hypothesis.

## Figure 1:

Average Number of Circulations by Gender per School Year


Nonfiction Circulation
Previous studies compared only the number of nonfiction books girls selected to the number boys selected but not to the number of fiction books the same girls and boys chose.

Hypothesis two stated that on average boys and girls in the population studied would select more fiction than nonfiction overall. Average annual circulations per student to boys and girls by the categories "Nonfiction (Dewey 000-999 and Biography)" and "Fiction (Everybody, Easy Reader and Fiction)" appear in Figure 2, Figure 3, and Figure 4.

Figure 2:
Mean Number of Circulations Per Student of Nonfiction vs. Fiction by Gender for $3^{\text {rd }}$ Grade


Figure 3:
Mean Number of Circulations Per Student of Nonfiction vs. Fiction by Gender for 4th Grade


Figure 4:
Mean Number of Circulations Per Student of Nonfiction vs. Fiction by Gender for $5^{\text {th }}$ Grade


For both boys and girls, the average number of circulations for nonfiction decreased as the students advanced to the next grade. In all three years, girls and boys select substantially more fiction than nonfiction titles, although the gap is smaller in boys in third and fourth grade. According to these data, hypothesis two is accepted.

Although the second hypothesis was supported using the basic definitions of fiction and nonfiction, these categories are broad and do not take into account that some books which are cataloged in the nonfiction section with a Dewey Decimal Number are not "informational" or "nonfictional" in nature. Therefore, the categories of "Stories" and "Informational" were created to assess more precisely these differences. "Stories" includes the fiction call numbers as well as graphic novels which are cataloged at 741.5, Star Wars books cataloged in 791.43 , poetry at 811 and traditional tales cataloged at 398.2 while "Informational" includes all other nonfiction classifications and biographies (Appendix B). Figure 5 accounts for the average circulations in these two categories over the three years in the study combined. Data in Figure 5 show that boys and girls both consistently check out more "stories" than "informational" books by comparing
percent of total selections for the three years between "stories" and "informational" books. The distinction made by these categories is even more pronounced than "fiction" versus "nonfiction."

Figure 5:
Percentage of Circulations Stories vs. Informational by Gender Over Three School Years


Table 1 reveals the even larger gap between "Stories" and "Informational" Books when analyzed by school year. The number of "Stories" circulated to boys and girls at least doubles the number of "informational" books checked out each year. With this altered definition of the categories, hypothesis two is still supported.

Table 1:
Mean Number of Circulations of "Stories" vs. "Informational" by Gender per School Year

|  |  | 3rd Grade |  |  |  | 4th Grade |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5th Grade |  |  |  |  |  |
|  | Girls | Boys | Girls | Boys | Girls | Boys |
| Stories | 81.3 | 85.5 | 88.6 | 76.8 | 62.8 | 58.4 |
| Informational | 28.9 | 42.2 | 18.8 | 35.4 | 7.8 | 15 |

## Graphic Novels Circulation

Hypothesis three states that on average boys and girls in the population studied select similar numbers of graphic novel and comic book titles. One of the most common assumptions about the reading habits of boys is a preference for graphic novels. As Figure 6 demonstrates, on
average, data confirmed that the boys in the study did check out considerably more graphic novels than the girls in the study each year. However, it is important to note that in comparison with fiction chapter books, graphic novels were still a distant second place for the boys in the study. This finding may be affected by the number of graphic novels available in the collection at the time of the study. Hypothesis three is not supported by the data in this study.

Figure 6:
Mean Number of Circulations of Graphic Novels and Comic Books by Gender per School Year


Fiction Series Books Circulation
Past studies indicated boys' interest in books in a series (Wicks, 1995). In the current study, certain fiction chapter books in a series occurred frequently in the data. Hypothesis four stated that on average boys and girls in the population studied would select a similar percentage of fiction titles from a series. Table 2 details the top five most circulated series for boys and girls over the three years in the study. Of all the girls in the study, $87 \%$ chose at least two books by Dan Gutman, $53 \%$ read books in the Geronimo Stilton series, $47 \%$ read books by Margaret Peterson Haddix, $40 \%$ read Goosebumps books, and $33 \%$ of all girls selected Diary of a Wimpy Kid books at least twice. Of all of the boys in the study, $72 \%$ selected a Dav Pilkey book at least
twice, $66 \%$ chose Dan Gutman, 62\% read Seekers or Warriors, $62 \%$ read Geronimo Stilton books, and 59\% chose a Star Wars fiction book at least twice.

Table 2
Top Five Series Circulated to Boys and Girls August 2008- June 2011

| Series Name | \% of girls <br> borrowing |
| :--- | ---: |
| Baseball Card Adventures OR My <br> Weird School by Dan Gutman | $87 \%$ |
| Geronimo Stilton | $53 \%$ |
| The Missing OR Among the ... by <br> Margaret Peterson Haddix | $47 \%$ |
| Goosebumps by R.L. Stine | $40 \%$ |
| Diary of a Wimpy Kid by Jeff <br> Kinney | $33 \%$ |


| Series Name | \% of boys <br> borrowing |
| :--- | ---: |
| Various by Dav Pilkey | $72 \%$ |
| Baseball Card Adventures OR My <br> Weird School by Dan Gutman | $66 \%$ |
| Seekers OR Warriors by Erin <br> Hunter | $62 \%$ |
| Geronimo Stilton | $62 \%$ |
| Star Wars Fiction by various <br> authors | $59 \%$ |

Table 3 summarizes the five most circulated series for boys and girls each school year. Books by Dan Gutman had strong appeal to both genders at all three grade levels and the Geronimo Stilton series was popular with boys and girls, especially with boys in $3^{\text {rd }}$ grade. R.L. Stine's

Goosebumps series appeared in the top five lists for both genders, but more consistently for girls.
Three series circulated exclusively to girls in the study, Ramona Quimby by Beverly Cleary, Judy Moody by Megan McDonald, and American Girl books. However, Ramona and the American Girl series were circulated infrequently among the girls; only three girls selected Ramona over the three years, three girls selected Judy Moody, and three girls selected the American Girl books. Interestingly, these were not the same three girls. In the fifth grade, the girls in the study abandoned books in series altogether except for their top five listed below, Diary of a Wimpy Kid (. 3 circulations) and Harry Potter (. 1 circulations) which ranked $6^{\text {th }}$ and $7^{\text {th }}$; no other series circulated to girls that school year. With the exception of Judy Moody, the boys in the study read some of each of the series in the girls' top five, but girls read fewer books by Dav Pilkey (at most .9 circulations in $3^{\text {rd }}$ grade), only two girls read any Star Wars, and no
girls selected the 39 Clues series. Diary of a Wimpy Kid had some appeal to girls (. 9 circulations in $3^{\text {rd }}$ grade, .3 in $4^{\text {th }}$ and $5^{\text {th }}$ ) but less than to boys ( 3.6 circulations in $3^{\text {rd }}$ grade, 2.9 in $4^{\text {th }}$ and .8 in $\left.5^{\text {th }}\right)$. Overall, Table 3 shows that the boys checked out at least an average of 1.3 books per boy in their top five series, and some series were borrowed an average of 7.7 circulations per boy.

Girls on the other hand borrowed a maximum average of 2.7 series books per girl with some in the top five only being circulated an average of .5 times per girl.

Table 3:

## Average Circulations of Top Five Fiction

| $\mathbf{3}^{\text {rd }}$ Grade Girls |  |  |
| :---: | :---: | :---: |
| Rank | Series Name | $\boldsymbol{n}$ |
| $\mathbf{1}$ | Baseball Card Adventures OR My <br> Weird School by Dan Gutman | $\mathbf{2 . 7}$ |
| $\mathbf{2}$ | Geronimo Stilton | $\mathbf{2 . 2}$ |
| $\mathbf{3}$ | Judy Moody by Megan McDonald | $\mathbf{1 . 4}$ |
| $\mathbf{4}$ | Goosebumps by R.L. Stine | $\mathbf{1 . 1}$ |
| $\mathbf{5}$ | Chet Gecko Private Eye by Bruce Hale | $\mathbf{1 . 1}$ |


| $\mathbf{4}^{\text {th }}$ Grade Girls |  |  |
| :---: | :---: | :---: |
| Rank | Series Name | $\boldsymbol{n}$ |
| 1 | Geronimo Stilton | 3.4 |
| 2 | The Missing OR Among the $\ldots$ by <br> Margaret Peterson Haddix | 1.3 |
| 3 | Baseball Card Adventures OR My <br> Weird School by Dan Gutman | 1.2 |
| 4 | Goosebumps by R.L. Stine | 1.3 |
| $\mathbf{5}$ | Harry Potter by J.K. Rowling | .7 |


| $\mathbf{5}^{\text {th }}$ Grade Girls |  |  |
| :---: | :---: | :---: |
| Rank | Series Name | $\boldsymbol{n}$ |
| 1 | Geronimo Stilton | 2.1 |
| 2 | Goosebumps by R.L. Stine | 1.3 |
| 3 | The Missing OR Among the ... by <br> Margaret Peterson Haddix | 1.1 |
| 4 | Baseball Card Adventures OR My <br> Weird School by Dan Gutman | .7 |
| 5 | Percy Jackson and the Olympians by <br> Rick Riordan | .5 |


| $3^{\text {rd }}$ Grade Boys |  |  |
| :---: | :---: | :---: |
| $\operatorname{Rank}$ | Series Name | $\boldsymbol{n}$ |
| $\mathbf{1}$ | Baseball Card Adventures OR My Weird <br> School by Dan Gutman | 7.7 |
| $\mathbf{2}$ | Geronimo Stilton | $\mathbf{7 . 5}$ |
| $\mathbf{3}$ | Books b Dav Pilkey | $\mathbf{6 . 9}$ |
| $\mathbf{4}$ | Star Wars (various) Fiction or Nonfiction | $\mathbf{6 . 7}$ |
| $\mathbf{5}$ | The Magic Treehouse by Mary Pope <br> Osborne | $\mathbf{3 . 8}$ |


| $\mathbf{4}^{\text {th }}$ Grade Boys |  |  |
| :---: | :---: | :---: |
| Rank | Series Name | $\boldsymbol{n}$ |
| 1 | Baseball Card Adventures OR My Weird <br> School by Dan Gutman | 3.7 |
| 2 | Geronimo Stilton | 3.6 |
| 3 | Seekers OR Warriors by Erin Hunter | 3.0 |
| 4 | Diary of a Wimpy Kid by Jeff Kinney | 2.9 |
| 5 | Star Wars (various) Fiction or Nonfiction | 2.7 |


| $\mathbf{5}^{\text {th }}$ Grade Boys |  |  |
| :---: | :---: | :---: |
| Rank | Series Name | $\boldsymbol{n}$ |
| 1 | Seekers OR Warriors by Erin Hunter | 3.1 |
| 2 | Baseball Card Adventures OR My <br> Weird School by Dan Gutman | 2.6 |
| 3 | Harry Potter by J.K. Rowling | 1.8 |
| 4 | Goosebumps by R.L. Stine | 1.4 |
| 5 | The Missing OR Among the $\ldots$ by <br> Margaret Peterson Haddix | 1.3 |

Every student in the population selected at least 7 titles which were a part of a series over the three years studied. Of all of the fiction chapter books selected by girls, between 5\% and 58\% were books in a series. The borrowing patterns were similar for most of the boys, except four male subjects checked out substantially higher percentages than the $58 \%$ selected by girls. Four of the boys in the study selected $65 \%, 71 \%, 76 \%$ and $90 \%$ fiction books in a series respectively. Interestingly, the boy who selected $90 \%$ of his fiction chapter books from series chose only Star Wars books or books in the Seekers or Warriors series by Hunter. This same student also selected the $2^{\text {nd }}$ fewest total number of fiction chapter books among the boys, 44 books. For the boy who selected the fewest number of fiction chapter books over the three years, only 15 titles, 7 of them were books in a series.

For most of the series that appeared frequently in the data, circulations were primarily to boys. Figure 7 shows the percentage of all fiction books circulated which were identified as part of a series identified by the researcher as appearing frequently. For boys in $3^{\text {rd }}$ grade, over half of fiction chapter books chosen were in a series. The peak for choosing chapter books in a series was in third grade for boys and girls in the population studied at $64 \%$ of fiction for boys and $23 \%$ for girls. At the lowest rates in fifth grade, boys still chose fiction in a series for $38 \%$ of all chapter book selections while girls only chose them $11 \%$ of the time. The data revealing a stronger preference for series books among boys fail to support hypothesis four.

Figure 7:
Percentage of Fiction in a Series Circulated by Gender per School Year


## Reading Preferences of Girls and Boys

In addition to addressing the above hypotheses, there were several unanticipated findings from these data. Preliminary analysis yielded subcategories with which to sort the circulations of boys and girls each year; several of these categories were unexpectedly common. The popularity of World Record books and almanacs amongst both genders was not surprising, but the fact that these types of books were popular enough to warrant their own category was. These titles are packed with glossy, colorful photographs of strange and amazing people and places and have captions which are easy to chunk and digest, or ignore completely. It is impossible to know what amount of text is actually being read by the students who select them, and may warrant further study to determine what students glean from these types of books.

Many previous studies attempted to determine the top reading interests of boys and girls through various methods. Although not one of the aims of the current study, patterns did emerge beyond the confirmation that that all children in the study selected more fictional works than informational books. Analysis of the data yielded the top five categories based on call number
for boys and girls at each grade level, enabling a long-term view of how the selection choices of children may change as they mature. Table 4 lists the top five categories for each gender and school year and includes the average number of circulations in each category.

## Table 4:

Top Five Categories Circulated to Boys and Girls per School Year ( $n=$ average circulations per student)

| 3rd Grade Girls |  |  | $\mathbf{4}^{\text {th }}$ Grade Girls |  | $\mathbf{5}^{\text {th }}$ Grade Girls |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rank | Category | $\boldsymbol{n}$ | Category | $\boldsymbol{n}$ | Category | $\boldsymbol{n}$ |
| 1 | Fiction Chapter Books <br> (ER, F) | 59.7 | Fiction Chapter Books <br> (ER, F) | 80.2 | Fiction Chapter Books (ER, F) | 57.9 |
| 2 | Animals \& Pets <br> Informational (590- <br> $599,636)$ | 13.2 | Animals \& Pets <br> Informational (590- <br> $599,636)$ | 6.0 | Graphic Novels (741.5) | 3.7 |
| 3 | Fiction Picture Books <br> (E) | 11.1 | Fiction Picture Books <br> (E) | 5.7 | Fiction Picture Books (E) | 2.9 |
| 4 | Poetry (811) | 3.0 | Joke Books \& Riddles <br> (793, 818) | 3.4 | Biography (B, 920) | 2.5 |
| 5 |  <br> Almanacs (030-032) | 3.0 | Miscellaneous <br> Informational <br> (see Appendix B) | 2.9 | Animals \& Pets Informational <br> $(590-599,636)$ | 1.8 |


| 3rd Grade Boys |  |  | $\mathbf{4}^{\text {th }}$ Grade Boys |  | $\mathbf{5}^{\text {th }}$ Grade Boys |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rank | Category | $\boldsymbol{n}$ | Category | $\boldsymbol{n}$ | Category | $\boldsymbol{n}$ |
| 1 | Fiction Chapter Books <br> (ER, F) | 64.6 | Fiction Chapter Books <br> (ER, F) | 54.3 | Fiction Chapter Books (ER, F) | 43.3 |
| 2 | Graphic Novels <br> (741.5) | 11.1 | Graphic Novels <br> (741.5) | 9.0 | Graphic Novels (741.5) | 7.1 |
| 3 | Sports Nonfiction <br> (796) | 6.8 | Miscellaneous <br> Informational <br> (see Appendix B) | 6.7 | Miscellaneous Informational <br> (see Appendix B) | 2.5 |
| 4 | Animals \& Pets <br> Informational (590- <br> 599,636) | 5.6 | Sports Nonfiction <br> (796) | 4.8 | Sports Nonfiction (796) | 2.2 |
| 5 | Miscellaneous <br> Informational <br> (see Appendix B) | 5.2 |  <br> Almanacs (030-032) | 4.1 | Biography (B, 920) | 1.9 |

For all grades and both genders, fictional chapter books, classified with the call number "ER" or " $F$ " are in first place by a wide margin. Differences begin to emerge in the remaining four places although for both boys and girls several categories remain popular: graphic novels, animals and . For boys, Graphic Novels stays firmly ranked second with Sports Nonfiction shifting between third and fourth place. Also popular for boys were books in various nonfiction locations categorized as Miscellaneous Nonfiction (see Appendix B) and the distinct categories of Animal Nonfiction, World Records and Almanacs and Biographies. Biographies were also popular for girls in $5^{\text {th }}$ grade this finding may reflect a class - wide project. For girls, Animals and Pets Nonfiction remained in the top five all three years, although shifting from second place ranking to fifth as time progressed. Girls continued to select Fiction Picture Books while boys seemed to give them up for graphic novels. Girls showed more interest in graphic novels beginning in $5^{\text {th }}$ grade, perhaps due to more books in that genre being available in the collection that year. Girls also showed an interest in World Records and Almanacs as well as books in the Miscellaneous Nonfiction category. In contrast to the researcher's expectations based on professional experience, categories such as Earth Science, Human Body and Technology, and History nonfiction did not occur in the top five lists for either boys or girls.

## Summary

The data in this study called into question several existing assumptions about the reading habits of elementary school age boys and girls. The hypothesis that boys and girls check out similar number of books was not supported by the data for all three school years. However, the hypothesis that both boys and girls select more fiction or "stories" than nonfiction or "informational books" was supported by this study's findings. Boys did tend to choose more nonfiction or informational books than the girls chose, but the overwhelming preference to select
fiction and stories remained. The data indicated support for the assumption that boys select graphic novels and comic books more often than girls do, but not more graphic novels than other types of books, therefore hypothesis three was not accepted. Results may have been contingent on the collection of graphic novels available at that particular library. Previous research indicated boys' preference for books in a series; this preference was also supported by the data in this study, thus the fourth hypothesis that girls and boys select a similar number of fiction books in series was not supported. This analysis of circulation data provided evidence that long-held assumptions about the reading preferences of elementary-school-age boys need to be examined systematically.

## CHAPTER 5

## CONCLUSIONS AND RECOMMENDATIONS

Assumptions about the number or types of books that boys will or will not read were have been dispersed widely in the popular media and in educational circles. These assumptions have sometimes been supported by research, but were more often given credence by a flawed method or skewed interpretation of the data. The current study examined the circulation records of elementary school boys and girls to determine what patterns existed in their checkout habits. This analysis of circulation data provided evidence that many assumptions about the reading preferences of boys and girls need to be studied carefully in order to avoid potential harm to students' decisions to read.

## Conclusions

The boys and girls in the study selected a variety of types of books over three years, but stories remained a preference. With the exception of fictional chapter books, at all grade levels there were some differences in the categories boys and girls selected for checkout. Boys did choose more graphic novels and informational books than did the girls, but still chose fiction chapter books or picture books $58 \%$ of the time.

The boys in the population studied checked out substantially more books than girls in third grade, but 6 to 10 fewer in fourth and fifth. Perhaps the argument made by Sax (2007) and others that reading is considered a feminine act could be supported by this drop off for boys as they mature, but the data also show girls reading fewer books as they mature as well. Fewer circulations to both genders could be related to length of books selected increasing, amount of homework increasing and therefore free time to read decreasing, or amount of time in class to read decreasing. Also possible is the perception that reading decreases in value as an activity for
boys or girls as they mature. Further study into the changing rates of circulations over time could investigate the reasons behind these trends.

Some in the media have suggested persuading boys to read by recommending nonfiction and graphic novels which boys will prefer over other types of reading (McQueen, 2011; Sullivan, 2004; Scieszka, 2008, London, 2011). These authors seemed to assume that most teachers and librarians have an aversion to graphic novels as "real reading." The boys in this study did borrow graphic novels more than girls did, but still highly favored fictional stories over nonfiction informational books. According to some, magazines articles are a favorite of boys, but the population studied did not select any magazines whatsoever (Sullivan, 2004; Scieszka, 2008; London, 2011). This lack of circulation could have been due to the available collection or a lack of interest. The appeal of graphic novels may continue to grow for both boys and girls as more quality publications for children are available and purchased by school libraries.

Findings in the current study affirm earlier findings revealing a preference among boys for books in a series. Results raised a value question as to whether books in a series are somehow different in literary worth when compared to standalone fiction works. Teachers and librarians need to consider whether or not to encourage this apparent enjoyment of books in series, or advise boys towards other types of fiction. Boys seemed to prefer certain series and more different series than girls; perhaps these popular series were often recommended by teachers or librarians to boys. Conversely, perhaps it was a lack of reader advisory that led boys to go back to familiar authors and series rather than trying a new book. Perhaps the girls in the population seemed uninterested in series because the collection simply offered more series aimed at boys than at girls. Investigation into the number of series published which are targeted to girls or boys could give more insight into how series are marketed and suggested to students.

Although the current study mentions various series by name, the specific titles selected by students are not what are most important in this study. Popular titles come and go, some are recommended by teachers and librarians more often than others, and peer pressure to select certain books will always exist. However, the patterns towards stories, books in a series, or animal-themed nonfiction can tell the profession something about how we select, recommend and teach about books.

The findings of the current study provide insights for librarians, teachers, parents, and other education professionals. For school libraries and classroom collections, the data support continuing to purchase a wide variety of quality fiction, including series, a variety of informational books, especially in the topics of animals and pets and record books, as well as good selection of graphic novels and comics. Collections should remain diverse, and collections of series should be kept up to date. Teachers and librarians need to be thoughtful in discussing books with both boys and girls. Awareness of potential stereotypes or assumptions about what a boy or girl is more likely to read needs to be raised. Caution is in order when tempted to steer boys to the nonfiction section and avoid recommending graphic novels to girls because of unfounded assumptions. Librarians may find themselves recommending a favorite series instead of standalone books to boys leaving them to find what is familiar. Educators need to encourage reading of all types if students will learn the behavior of adult readers who in a single day may read blog posts on their iPad with breakfast, a news blurb on a search engine result page, an entry in a phone book, reviews of a new appliance being considered for purchase and a chapter of a book for their own enjoyment before bed. Reading is of value because it gives us an opportunity to learn or solve problems, to enjoy, and to enrich our lives.

## Recommendations for Further Study

Through replication of the current study, the findings could be compared for populations in urban or rural schools, for student populations with higher or lower rates of free and reduced lunches, and for schools without a library curriculum. The population of this study contained 29 boys and only 15 girls; the gender make-up of a class or grade could potentially affect how students choose books and what they select. A follow-up study may benefit from adding a map of the collection available to students in order to compare what is available to students with what they actually borrow; for example, the current study findings regarding graphic novels may have been influenced by availability of this format.

Bibliometrics is a methodology that does not investigate the rationale behind behaviors. Another methodology might explore other aspects of children's borrowing behaviors. Reliance on peer recommendations to select books is worthy of investigation as well.

Additionally, study into teacher and librarian perception of what is considered "real reading" may shed more light onto how stereotypes about children's reading habits are formed or perpetuated. For example, if teachers and librarians truly feel that graphic novels are not worthwhile reading material, the message we may be sending to children is that we do not value books which interest them.

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## APPENDIX A

## DATA COLLECTION INSTRUMENT

|  | Girls |  |  |  |  |  | Boys |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 3rd |  | 4th |  | 5th |  | 3rd |  | 4th |  | 5th |  |
|  | Total | Avg | Total | Avg | Total | Avg | Total | Avg | Total | Avg | Total | Avg |
| TOTAL CIRCULATED |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Graphic Novel 741.5 |  |  |  |  |  |  |  |  |  |  |  |  |
| Poetry 811 |  |  |  |  |  |  |  |  |  |  |  |  |
| Fiction ER, F |  |  |  |  |  |  |  |  |  |  |  |  |
| Folktale, Traditional, Scary 398 |  |  |  |  |  |  |  |  |  |  |  |  |
| StarWars (nonfiction) |  |  |  |  |  |  |  |  |  |  |  |  |
| picture books E |  |  |  |  |  |  |  |  |  |  |  |  |
| "STORIES" |  |  |  |  |  |  |  |  |  |  |  |  |
| Records/Almanacs 031 |  |  |  |  |  |  |  |  |  |  |  |  |
| Biography B, 920 |  |  |  |  |  |  |  |  |  |  |  |  |
| Drawing, Origami 743 |  |  |  |  |  |  |  |  |  |  |  |  |
| Animals \& Pets 590-599, 636 |  |  |  |  |  |  |  |  |  |  |  |  |
| Human Body \& Tech 611-630 |  |  |  |  |  |  |  |  |  |  |  |  |
| Earth Science 500-589 |  |  |  |  |  |  |  |  |  |  |  |  |
| joke books/riddles 793,818 |  |  |  |  |  |  |  |  |  |  |  |  |
| Misc Nonfiction |  |  |  |  |  |  |  |  |  |  |  |  |
| Sports Nonfiction |  |  |  |  |  |  |  |  |  |  |  |  |
| History Nonfiction (900-999) |  |  |  |  |  |  |  |  |  |  |  |  |
| "INFORMATIONAL" |  |  |  |  |  |  |  |  |  |  |  |  |
| ALL NONFICTION 000-999, B |  |  |  |  |  |  |  |  |  |  |  |  |
| ALL FICTION E, ER, F |  |  |  |  |  |  |  |  |  |  |  |  |
| Star Wars (fiction and nonfiction) |  |  |  |  |  |  |  |  |  |  |  |  |
| Diary of a Wimpy Kid |  |  |  |  |  |  |  |  |  |  |  |  |
| Dan Gutman Books |  |  |  |  |  |  |  |  |  |  |  |  |
| Geronimo Stilton |  |  |  |  |  |  |  |  |  |  |  |  |
| Harry Potter |  |  |  |  |  |  |  |  |  |  |  |  |
| Dav Pilkey Books |  |  |  |  |  |  |  |  |  |  |  |  |
| Goosebumps |  |  |  |  |  |  |  |  |  |  |  |  |
| Magic Treehouse |  |  |  |  |  |  |  |  |  |  |  |  |
| 39 Clues |  |  |  |  |  |  |  |  |  |  |  |  |
| City of Ember |  |  |  |  |  |  |  |  |  |  |  |  |
| Judy Moody |  |  |  |  |  |  |  |  |  |  |  |  |
| Inkheart |  |  |  |  |  |  |  |  |  |  |  |  |
| How to Train Your Dragon |  |  |  |  |  |  |  |  |  |  |  |  |
| Ramona |  |  |  |  |  |  |  |  |  |  |  |  |
| Chet Gecko |  |  |  |  |  |  |  |  |  |  |  |  |
| American Girl |  |  |  |  |  |  |  |  |  |  |  |  |
| Seekers, Warriors |  |  |  |  |  |  |  |  |  |  |  |  |
| Margaret Peterson Haddix |  |  |  |  |  |  |  |  |  |  |  |  |
| Percy Jackson |  |  |  |  |  |  |  |  |  |  |  |  |

## APPENDIX B

## DATA ANALYSIS CATEGORIES

| Categories | Descriptions |
| :---: | :---: |
| All Nonfiction | 000-999, and B(biography) including folktales, poetry and graphic novels. |
| All "stories" | Includes, E, ER, F, Poetry, Folktales, Graphic Novels, Star Wars nonfiction. |
| All "informational" | Almanacs, records, biographies, drawing, origami, animals and pets, joke books, riddles, sports, history and other "miscellaneous" nonfiction. |
| Fiction | Call numbers beginning with ER (easy reader), F (fiction), or PB F (paperback fiction). |
| Picture Books | Call numbers beginning with E (everybody). |
| Comics \& Graphic Novels | Call number 741.5. |
| Poetry | Call number 811. |
| Traditional Tales | Call numbers 398-398.4 - includes Mother Goose, folktales, some mythology, scary story collections |
| World Records, Almanacs and Facts | Call numbers 030-032 - reference type books including top ten lists, Guinness Book of World Records, Scholastic Almanacs, etc. |
| How to Draw, Origami | Call numbers 743,745,736. Drawing instructions, paper crafts, mostly origami. |
| Earth Science | Call numbers 500-589. Includes space, planets, rocks, weather, dinosaurs, plants. |
| Human Body \& Technology | Call numbers 611-630. Bones, muscles, human body, technology, vehicles, robotics. |
| Animal Nonfiction | Call numbers 590-599, 636-639 - includes wild animals, domesticated animals, pet care, insects |
| Riddles \& Jokes | Call numbers 793 (I Spy Picture Riddles), and 818 jokes and riddles. |
| Sports Nonfiction | Call numbers 796. |
| History Nonfiction | Call numbers 900-999, excluding 920. |
| Star Wars Nonfiction | Call number 791.43. Other Star Wars book cataloged in fiction. |
| Biography | Call numbers beginning with B (biography) and 920 (collective biography). |
| "Miscellaneous" nonfiction | 001-025, 133.1-397,399-499,600-635,640-735, 737-739, 741.6, 793,808. Phenomenon, cultures, ghost stories, religion, language, lit collections, hobbies, structures, technology. |
| Diary of a Wimpy Kid | F KIN |
| Dan Gutman | F GUT - Baseball Card Adventures and Miss Holly is too Jolly... etc. |
| Geronimo Stilton | F STI |
| Harry Potter | F ROW |
| Dav Pilkey | E PIL and F PIL - Kat Kong, Dogzilla, Ricky Rickotta, Captain Underpants, Ook and Gluk, SuperDiaper Baby |
| Goosebumps | F STI - R.L. Stine |


| Categories | Descriptions |
| :--- | :--- |
| Magic Treehouse | F OSB - Osborne, various titles |
| Haddix | F HAD - Among the... series and The Missing series |
| Percy Jackson | F RIO - Riordan. Lightning Thief and Son of Neptune series |
| Chet Gecko | F HAL - Chet Gecko Private Eye series |
| 39 Clues | 39 Clues series - various titles as listed on 39 Clues website |
| City of Ember | F DUP - DuPrau, City of Ember, People of Sparks, Prophet of <br> Yonwood, Diamond of Darkhold |
| Judy Moody | F MCD - McDonald, Judy Moody series, various titles |
| How to Train Your <br> Dragon | F COW - Cowell. How to Train your Dragon series, various titles |
| Ramona Quimby | F CLE - Cleary, various titles including the name Ramona |
| American Girl | Various authors and titles as listed on American Girl website |
| Seekers and Warriors | F HUN - Hunter, various titles in the two series |

