독서 동기유발에 있어서 학년별, 성별 그리고 출생순서에 따른 차이에 관한 연구
A Study of the Differences of the Reading Motivation Based on Grade Level, Gender, and Birth Order

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초 록

독서 동기유발의 정도는 학생들의 나이, 성별, 관심 및 적성에 따라 각각 다르게 나타난다. 따라서 각 학생들이 독서 동기유발의 여러 가지 요인 중 어떤 요인에 더 영향을 받는지를 이해하는 것은 학생들을 평생 독서가로 이끄는 역할을 하는 사서교사에게 가장 필수적인 척도가 될 것이다. 이에 본 연구에서는 학년별, 성별, 그리고 출생순서별로 독서 동기유발에 차이점이 있는지를 살피고 어떤 요인으로 학생들의 독서 흥미유발을 시도할 것인가를 조사하기 위해서 질문지법을 사용하여 연구를 수행하였다. 질문지는 독서 동기를 유발하는 요소를 6가지로 범주화하여 25개 항목으로 구성하였으며, 278명(2학년 142명, 5학년 136명/ 140명의 남학생 138명의 여학생 119명의 첫째 그리고 159명의 둘째 이상으로 태어난 학생)을 대상으로 하였다. 연구 결과 2학년과 5학년 간에는 독서 동기유발의 정도에서 유의한 차이가 나타났으나, 남학생과 여학생, 그리고 첫 자녀와 기타 출생순서의 자녀에서는 유의한 차이가 나타나지 않았다. 연구의 끝부분에는 학생 개개인 또는 그룹별을 위한 독서 흥미를 유발할 수 있는 실제적인 방안과 활용법을 제시하였다.

ABSTRACT

Knowing about each student's reading motivation is important to school librarians in producing life-long readers in their students. This research asks the questions, are there any significant differences of reading motivation between grade level, gender, and birth order? and what kinds of reading motivation can encourage students to read books? The questionnaire method composed of 25 items was used for 278 students. The sample consisted of 142 students in 2nd, 136 in 5th grade, 140 boys and 138 girls, and 119 first born and 159 other birth order students. Finding shows that significant differences were observed for the reading motivation in 2nd and 5th grade, no significant differences between boys and girls, and no significant differences between birth order students were observed. It concludes with recommendations of reading motivation to each student or group.

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1. Introduction

How do we motivate students to read? Recently this question is the most popular theme among teachers and parents. For finding appropriate answers of this question, let's start to think of the relationship between medicine and education. Just as medical doctors give appropriate medicines to patients according to their diseases, it is the same in education. When teaching matches students' interests and levels, then it is an effective way in education. Therefore the teacher must adjust to each student's concern, interest and level on every educational part. Especially in teaching reading, it is important to understand that every student has a different reading motivation. Some students may be motivated to read books through teachers' praise. Others may be motivated by the desire to want to be a good reader. Knowing about each student's reading motivation, whether highly motivated or less motivated, is worth while to educators, school librarians and parents in producing life-long readers in their students.

We already know what motivates the student to read is very important. We can use many tools to motivate reading but students will read only when they are motivated. Gambrell et.al(1996) discovered that highly motivated readers are self-determining and generate their own reading opportunities. They want to read and choose to read for a wide range of personal reasons such as curiosity, involvement, social interchange, and emotional satisfaction. The sources of motivation vary among different ages, different sexes, and so forth. According to Lumsden (1994), each student may be equally motivated to perform a task, but the sources of their motivation may differ. Therefore educators need to know that not all students can be motivated in the same ways.

After watching many higher grade students who don't like to read books and lower grade students who eagerly want to read books, I have to question why some students like to read books and what is their motivation to read books while some students don't like to read, and how could I motivate those students? I would like to find an answer to this question: Are there significant differences in motivation for lower grades versus higher grades, girls versus boys, and first born and other birth order students? What kinds of reading motivation can encourage students to read books based on their grade, gender, and birth order?

This information will be a good guide to teachers, school librarians, school administrators and parents. It will be a clue to understanding the motivating factors in each group respectively. When teachers, school librarians and parents guide their students with this result, it will be a good practical application.

2. Literature Review

There is some research about reading motivation, the difference between higher grade levels and lower grade levels, and the difference between boys and girls in reading attitude.

According to Johnson (2000), students are introduced in school to the need to become motivated. In education, motivation has been used to improve student academics and performance. Motivation is considered either intrinsic or extrinsic. Hill (1999) insists that intrinsic motivation is internal and it satisfies basic human needs. Extrinsic motivation includes many things that the instructor can do, including grading, providing encouragement, incentives, and friendship. Intrinsic and extrinsic motivations are a foundational part of learning. In education, various types of motivation play an important role in the learning environments. Therefore, understanding students' uniqueness and complexities is essential (Marinak, 2004).

Guthrie & Anderson (1999) mentioned six types of motivation for reading that answer the question, "Why are you reading that text?" There are involvement, curiosity, social reasons, challenge, importance, and efficacy. There are also external motivations; one is recognition, which refers to the desire to be known as a good reader and appear competent. Other extrinsic motivations are competition and grades. Finally, work-avoidance is a negative motivation. Wigfield and his colleagues reported that the strongest motivations were grades, followed by importance, compliance and recognition (Wigfield, Wilde, Baker, Fernandez-Fein, & Scher, 1996).

According to Fawson & Moore(1999), an extrinsic orientation is demonstrated when a student's purpose for participation in a given activity is to receive some type of external reward. It may be food, money, recognition, or any number of prizes attractive to the recipient. An intrinsic orientation views the participation as competent and capable of completion a task as the desired end. Intrinsic motivation may be challenging, complexities, and incongruities, and the task completion provides a feeling of competence, mastery, self-determination, and control. However as Hill(1999) says, it is difficult that the differences between intrinsic and extrinsic motivation identify exactly.

In conjunction with gender differences, the attitude score for girls tended to be more positive than for boys in the follow research, "Attitude Development Toward Reading in Grades One Through Six"(Parker and Paradis, 1986). Many researches have shown a reduction in boys' reading motivation at higher grade school years (Andermann & Maehr, 1994; Eccles, Midgley, Wigfield, Buchanan, Reuman, Flanagan & Maclver, 1993). According to Garton(2005), boys

are more willing to open up to a mentor slightly older than themselves. Before the project, he found there is a 35 percent gap in reading results between boys and girls in the Pinehurst Junior High School Students. The following year the gap had disappeared. Many students are often most motivated when reading with others. Metsala and McCann(1996/1997) insist that some of the dimensions of motivation are related to one another. For example, children who are curious to read more about interesting topics also appear to like challenging reading, enjoy a variety of reading topics, and want to get good reading grades. In a study of Wigfield & Guthrie(1997) they examined gender effects and found that boys and girls didn't differ in the amounts of reading time, nor were there gender differences. However, some other research shows that girls are more positive about reading than are boys(Eccles, Wigfield, Harold & Blumenfeld, 1993; Marsh, 1989).

Blake(1989) discussed that first born students are often seen as high achievers by their parents and younger siblings, but in school they perform no better, on the average, than other birth order students. According to Harris(2002), many studies have found statistically significant differences in personality between the first born and other birth orders. On the other hand, many other studies have failed to find birth order differences. He insists the reason is the result of research method. Also, he mentions certain research methods can produce misleading results. In this research, we can see whether first born and other birth order students have differences in reading motivation or not.

As the literature demonstrates, it is obvious that all theories insist upon the importance of motivation, even though there are many similarities and differences in motivation theories. To motivate reading in students we should consider students' diversity such as grade, gender, interest, preference, and so forth. Therefore, I investigate whether there is a significant difference in reading motivation based on grade, gender and birth order. For the grade, 2nd and 5th grade students were chosen. 2nd and 5th grade represent lower grade students and higher grade students, respectively.

The research was designed to answer three questions: (1) Are there any significant differences between 2nd grade and 5th grade in reading motivation? (2) Are there any significant differences between boy and girl students in 2nd grade and 5th grade in reading motivation? (3) Are there any significant differences between first born and other students of 2nd grade and 5th grade in reading motivation?

3. Method

3.1 Participants

The students represented 2 schools located in the urban school district in a Southwestern state, USA. This area is located in the middle of the two big cities. Although individual participant demographic data were not available, two schools' enrollment was 60 % Anglo, 13 % Hispanic, 20% African American, 7% Asian and 1% Native American, and 74 % Anglo, 10% Hispanic, 10% African American, 5.5% Asian and 1% Native American, respectively.

Originally, 290 students in 2nd and 5th grades responded to the questionnaires. After I discarded 12 unfaithful replies, I accepted a total of 278 questionnaires for this research. The sample consisted of 142 students in 2nd grade, 136 in 5th, 140 boys and 138 girls, and 119 first-born students and 159 other birth order students.

3.2 Instrument

According to Choi(2006), there are two most popular questionnaires for the assessment of reading motivation: MRQ(Motivation for Reading Questionnaire) and MRP(Motivation to Read Profiles). However these still had weakness in assessing students' reading motivation. MRQ consists of 11 dimensions with 55 items may be too lengthy for elementary students. The shorter items should be more suitable for elementary students. MRP consists of self-perception and value of reading. It should mention more about motivation instead of self-perception and value of reading.

For this study, the questionnaire was developed by Choi's research (2006), a study of reading assessment tools from a psychological standpoint of readers. The questionnaire consists of 25 items. It consists of 6 subjects: intrinsic, general extrinsic, environment, social interaction with teachers, parents and siblings, and friends. As mentioned before, there are curiosity, social reasons, challenge, competition and rewards in reading motivation. Therefore, these kinds of reading motivation were categorized as intrinsic motivation, extrinsic motivation, environment, and social interaction. According to Hill(1999), intrinsic motivation is internal and it satisfies basic human needs. Intrinsic motivation may be curiosity, challenge, complexities and competence. General extrinsic motivation may be food, money, recognition, and prizes. For example, "I read books to learn more," on the intrinsic category and "I read books to get my

parents' praise" on the social interaction with parents. For more understanding, the questionnaire is provided in Appendix A. The questionnaire was designed to be administered to a group of students, with the school librarian reading aloud each item.

The questionnaire is scored using a Likert scale, with five points assigned to strongly agree, four points to agree, three points if undecided, two points to disagree, and one point to strongly disagree. Considering the elementary students' understanding of face shapes used for scales, I used these shapes from Alexander and Filler's Attitudes and Reading(1976). The five different facial shapes were shown to choose students' answers ranging from a very positive response as 5 points to a very negative response as 1 point. Scores for each student may be obtained by summing item responses. The number of items from each category is presented in Table 1.

〈Table 1〉 Number of Items per Category

Category		Number of the item	Total Scores
Intrinsic		3	15
Extrinsic	General Extrinsic	4	20
	Environment	6	30
Social Interaction	Teachers	4	20
	Parents	3	15
	Siblings	1	5
	Friends	4	20
Total		25	125

Reliability for the questionnaire was established using Cronbach's coefficient alpha. On research fields, more than .5 Cronbach's coefficient alpha is considered as appropriate reliability. Correlations among variables are displayed in Table 2.

〈Table 2〉 Correlation of the each category

Category	1	2	3	4	5	6
1. Intrinsic	—	.536**	.688**	.594**	.560**	.528**
2. General Extrinsic		—	.607**	.584**	.531**	.562**
3. Environment			—	.767**	.754**	.634**
4. Social Interaction with teachers				—	.798**	.656**
5. Social Interaction with parents					—	.707**
6. Social Interaction with friends						—

** Correlation is significant at the 0.01 level (2-tailed)

Several school librarians, some professors and masters degree students in the education

department reviewed content validity for the questionnaire. After their reviews, the word rates changed to the facial scale for elementary students' understanding, and social interaction categories separated into 3 subcategories: social interaction with teachers, parents and friends. Also it applied a pilot study to five 2nd grade students and five 5th grade students. After a pilot study, 5 items were discarded and some words were revised. The final instrument was composed of 25 items.

Scores for each category may be obtained by summing item responses. The scores on the intrinsic category can range from 3 to 15, the scores on the general extrinsic category can range from 4 to 20, the scores on the environment category can range from 6 to 30, and the scores on each social interaction category can range from 4 to 20 with a possible total composite score range of 25 to 125.

3.3 Procedures

Permission was granted through the participating school librarians to conduct the survey on grades 2 and 5 in two schools. The survey was administered to each student by the school librarian during the second week of March 2006. The librarians explained that the purpose of the survey was to study students' thoughts and experiences about reading motivation and that it is not a test with correct and incorrect responses. The school librarians read each question aloud in each grade's library class, while students read along silently. It took about 10 to 15 minutes to complete the questionnaire. All the completed questionnaires were collected by the school librarian and returned to the investigator.

The t-test for independent samples was employed to analyze data through SPSS.

4. Finding

Data were obtained on six categories: intrinsic, general extrinsic, environment, interaction with teachers, parents, and friends in the 278 students. The descriptive statistics for the sample are presented in Table 3.

⟨Table 3⟩ Means, Standard Deviations and other descriptive statistics

	N	Minimum	Maximum	Mean	Standard Deviation
Intrinsic	278	3	15	11.85	3.054
General Extrinsic	278	4	20	15.47	3.978
Environment	278	6	30	22.15	6.153
Interaction with Teachers	278	4	20	14.45	4.516
Interaction with Parents	278	4	20	13.64	4.709
Interaction with Friends	278	4	20	12.98	4.889

For more understandable comparison the summed score of each group is converted in terms of total possible scores of 15 equals 100 percent in intrinsic, 20 equals 100 percent in general extrinsic, and so on, with 125 equaling 100 percent in total. The data analyses of the reading motivation in 2nd and 5th grade, boys and girls and first born and other birth order students are presented in Table 4.

⟨Table 4⟩ Total Scores of the reading motivation based on grade, gender and birth order

Grade, gender, and birth order/Percentage convert from summed score to 100%	Intrinsic /15	General Extrinsic /20	Environment /30	Social Interaction with Teachers /20	Social Interaction with Parents or Siblings /20	Social Interaction with friends /20	Total /125
2nd grade	87.9%	87.5%	83.2%	80.7%	78.3%	71.3%	81.3%
5th grade	69.6%	66.9%	64.0%	63.5%	57.7%	58.3%	63.1%
Boys	77.3%	77.9%	72.3%	70.4%	70.2%	64.3%	71.3%
Girls	80.7%	76.8%	75.4%	74.2%	79.8%	65.5%	73.6%
First born students	79.7%	75.9%	74.8%	71.7%	68.4%	64.3%	72.4%
Other birth order students	78.5%	78.5%	73.1%	72.7%	68.1%	65.4%	72.5%
2nd grade boys	85%	87.6%	81.7%	76.7%	75.8%	70.2%	79.4%
2nd grade girls	90.9%	87.4%	84.8%	84.9%	81%	72.45%	83.4%
2nd grade first born students	94.2%	87.1%	86.9%	82.75%	81.45%	75.6%	83.9%
2nd grade other birth order students	87.1%	87.3%	81.2%	79.6%	76.7%	69%	80%
5th grade boys	68.9%	67.4%	62%	63.5%	56.7%	57.9%	62.4%
5th grade girls	70.3%	66.3%	65.9%	63.6%	58.6%	58.7%	63.7%
5th grade first born students	72.9%	68.1%	66.4%	64%	59.2%	56.3%	64.3%
5th grade other birth order students	66%	65.6%	61.5%	62.9%	55.9%	60.5%	61.9%

For more easy understanding see Figure 1.
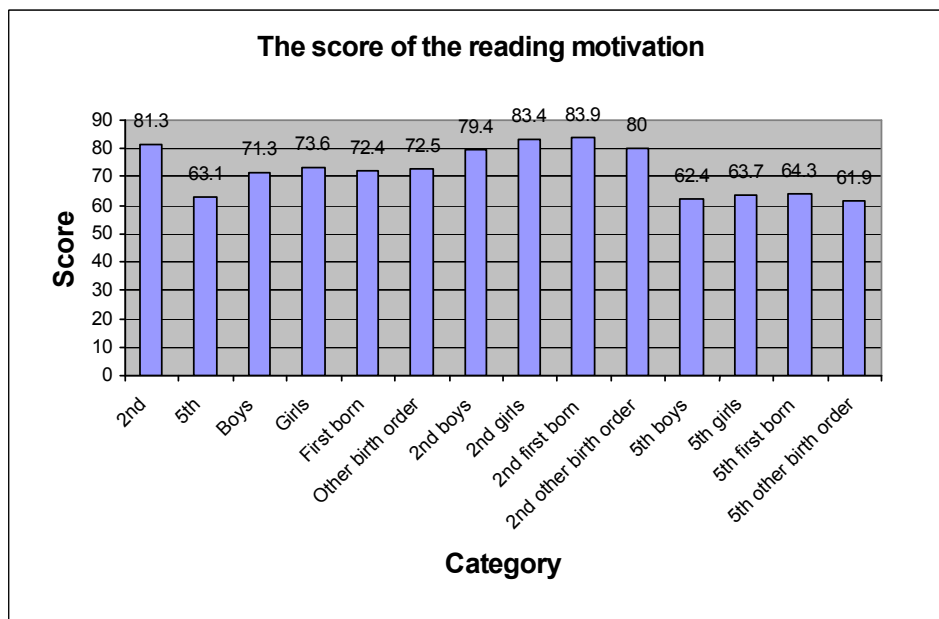
⟨Figure 1⟩ The reading motivation based on grade, gender and birth order

The scores for reading motivation are different depending on grade, gender and birth order. Among various groups, 2nd grade first born students is the highest reading motivation group. Following this group, the group of the 2nd grade girls is next. The group of the 5th grade other birth order students is the lowest reading motivation group, and next lowest group is 5th grade boys.

1) The reading motivation of 2nd and 5th grade students

The summed average score of 2nd grade students is eighty one point three percent in terms of total possible scores of 125 equalling 100 percent; otherwise the average score of 5th grade students is sixty three point one percent. For more specific comparisons, see Figure 2.

2nd and 5th grade students are different from each other in reading motivation. In all six categories: intrinsic, general extrinsic, environment, social interaction with teachers, social interaction with parents, and social interaction with friends, 2nd grade students were more affected in reading motivation than 5th grade students. Intrinsic motivation was the highest motivation in both grades. Social interaction with friends and social interaction with parents
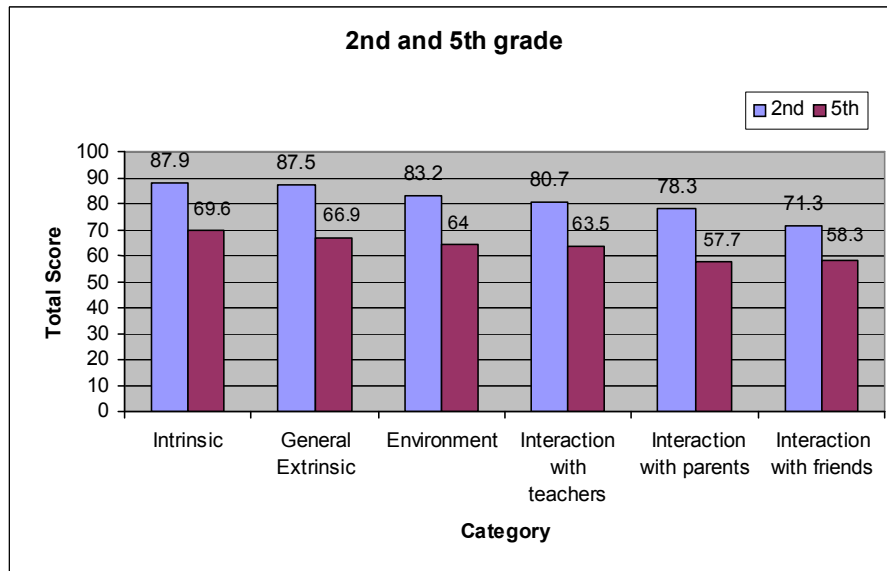
2nd and 5th grade

〈Figure 2〉 The reading motivation of 2nd and 5th grade students

are the lowest motivation in 2nd and 5th grades, respectively.

Findings related to which category is more effective in reading motivation were very similar for both grades. Intrinsic motivation was the highest category in all groups. Following intrinsic in 2nd grade was general extrinsic, environment, social interaction with teachers, parents and siblings and friends. Findings show that 2nd and 5th grade students are more concerned about social interaction with teachers than with parents and friends.

2) The reading motivation of boys and girls

The summed average score of boys is seventy one point three percent in terms of total possible scores of 125 equaling 100 percent; otherwise the average score of girls is seventy three point six percent. For more specific comparisons, see Figure 3.

In five categories: intrinsic, environment, social interaction with teachers, social interaction with parents, and social interaction with friends, girls were more affected in reading motivation than boys, even though the difference of reading motivation between boys and girls is slight. In only general extrinsic, boys were more affected in reading motivation than girls. Intrinsic motivation in the girls was the highest motivation; otherwise general extrinsic motivation in the boys was the highest one. Social interaction with friends is the lowest motivation in both genders. In girls' case they are more concerned about interaction with parents.
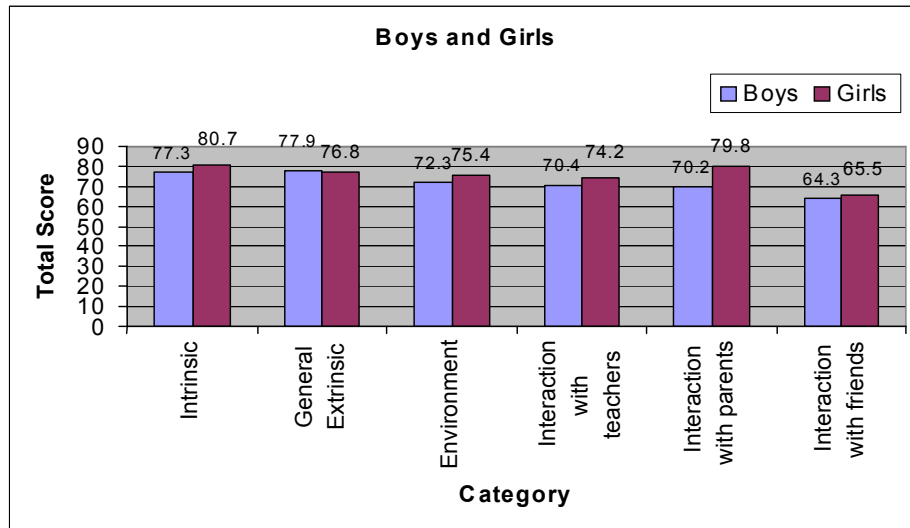
〈Figure 3〉 The reading motivation of boys and girls

3) The reading motivation of first born and other birth order students

The summed average score of first born students is seventy two point four percent in terms of total possible scores of 125 equaling 100 percent; otherwise the average score of other birth order students is seventy two point five percent. For more specific comparisons, see Figure 4.
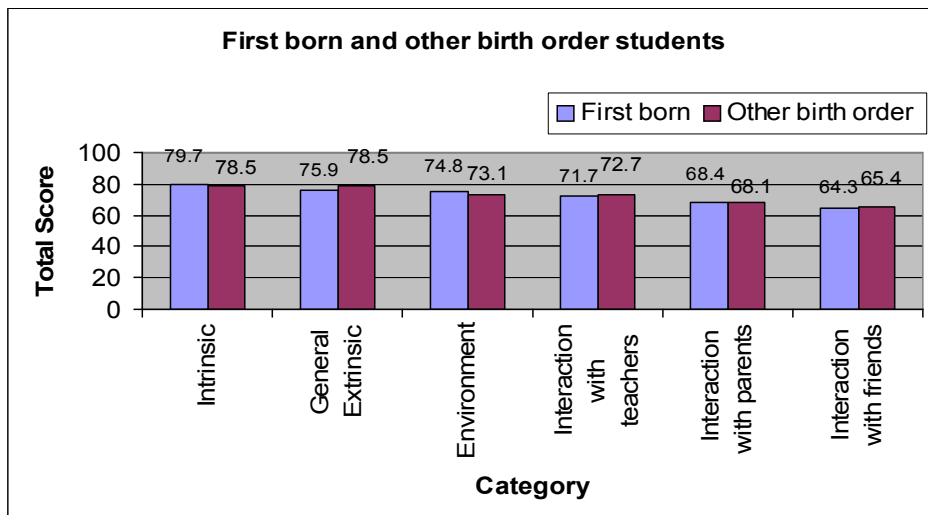
〈Figure 4〉 The reading motivation of first born and other birth order students

In first born and other birth order students there aren't many differences. Intrinsic motivation in the first born students was the highest motivation; intrinsic and general extrinsic motivation in the other birth order students were also the highest motivation. The other birth order students are more concerned about general extrinsic. Sulloway(1996) characterizes firstborns as ambitious, domineering, jealous, aggressive, conventional, and close-minded, and other birth orders as rebellious, adventurous, agreeable, sympathetic, and receptive to new ideas. It represents that first born students are more affected by intrinsic motivation while other birth order students are more affected by extrinsic motivation.

4) The reading motivation of the 2nd grade boys and girls

The summed average score of 2nd grade boys is seventy nine point four percent in terms of total possible scores of 125 equaling 100 percent; otherwise the average score of 2nd grade girls is eighty three point four percent. For more specific comparisons, see Figure 5.
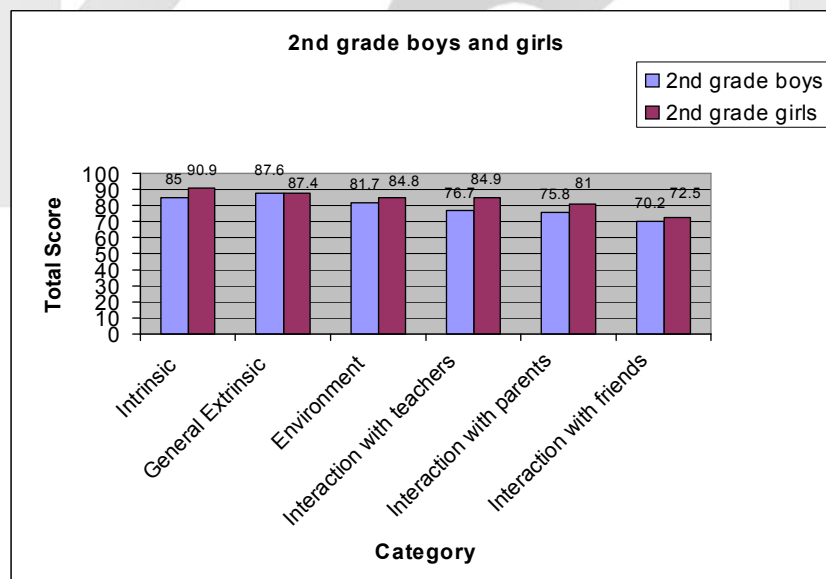
〈Figure 5〉 The reading motivation of 2nd grade boys and girls.

In five categories: intrinsic, environment, social interaction with teachers, social interaction with parents or siblings, and social interaction with friends, 2nd grade girls were more affected in reading motivation than 2nd grade boys. Even though the difference of general extrinsic is slight, boys' general extrinsic motivation is a little higher than girls'.

Intrinsic motivation in the 2nd grade girls was the highest motivation; otherwise general extrinsic motivation in the 2nd grade boys was the highest one. Social interaction with friends is lowest motivation in both groups. In the 2nd grade girls' case they are more concerned about interaction with teachers.

5) The reading motivation of 2nd grade first born and other birth order students

The summed average score of 2nd grade first born students is eighty three point nine percent in terms of total possible scores of 125 equaling 100 percent; otherwise the average score of 2nd grade other birth order students is eighty percent. For more specific comparisons, see Figure 6.

2nd grade first born and other birth order students

Legend: 2nd grade first born | 2nd grade other birth order

Category	2nd grade first born	2nd grade other birth order
Intrinsic	94.2	87.1
General Extrinsic	87.1	87.3
Environment	86.9	81.2
Interaction with teachers	82.8	79.6
Interaction with parents	81.5	76.7
Interaction with friends	75.6	69
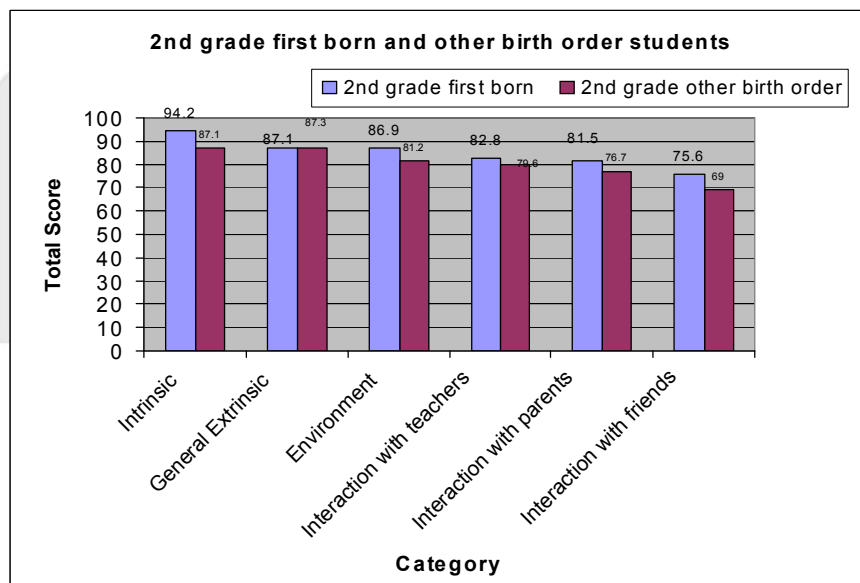
⟨Figure 6⟩ The reading motivation of 2nd grade first born
and other birth order students

In the 2nd grade first born and other birth order students there aren't many differences. Intrinsic motivation in the 2nd grade first born students was the highest motivation; general extrinsic motivation in the other birth order students was the highest motivation. In five categories: intrinsic, environment, social interaction with teachers, parents, and friends, 2nd grade other birth order students are lower than in 2nd grade first born students. Even though the difference is slight, general extrinsic in 2nd grade other birth order students is higher than

in 2nd grade first born students.

6) The reading motivation of the 5th grade boys and girls

The summed average score of 5th grade boys is sixty two point four percent in terms of total possible scores of 125 equaling 100 percent; otherwise the average score of 5th grade girls is sixty three point seven percent. For more specific comparisons, see Figure 7.
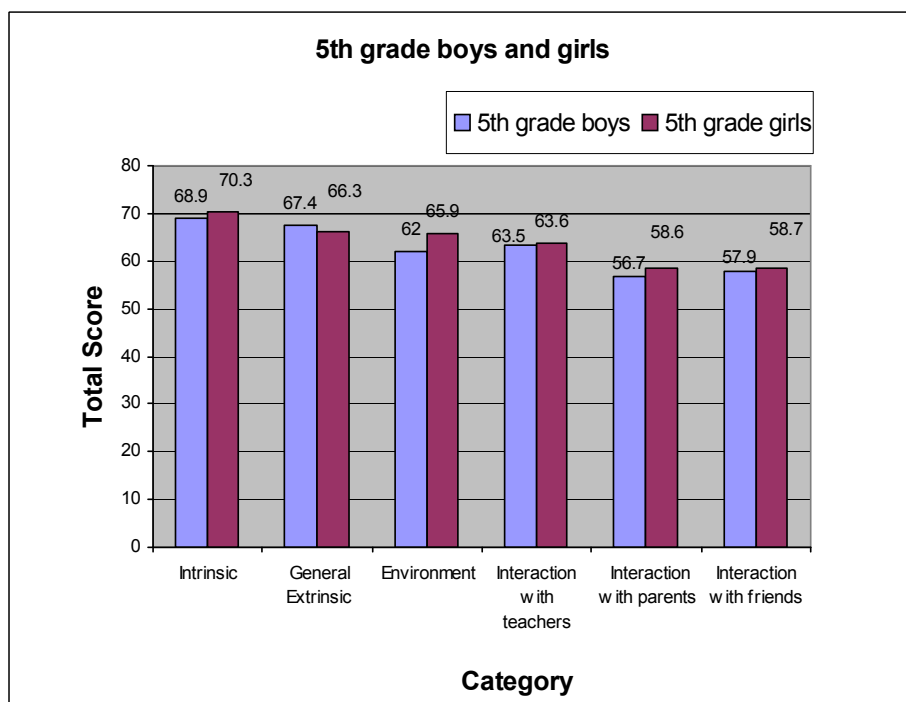
⟨Figure 7⟩ The reading motivation of 5th grade boys and girls

In the 5th grade, boys and girls don't have many differences. Intrinsic motivation was the highest motivation in both groups. Social interaction with parents is the lowest motivation in both groups. Findings show that 5th grade boys are more concerned about social interaction with teachers than environment. This result supports the research of the Wigfield & Guthrie(1997) that there weren't gender differences.

7) The reading motivation of 5th grade first born and other birth order students

The summed average score of 5th grade first born students is sixty four point three percent

in terms of total possible scores of 125 equaling 100 percent; otherwise the average score of 5th grade other birth order students is sixty one point nine percent. For more specific comparisons, see Figure 8.
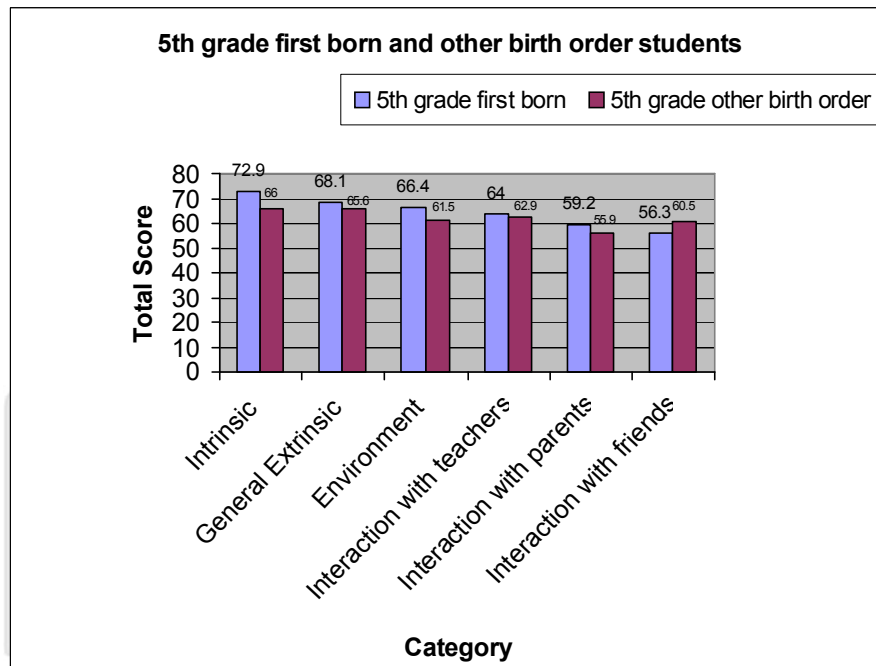
⟨Figure 8⟩ The reading motivation of 5th grade first born
and other birth order students

Intrinsic motivation was the highest motivation in both groups. In five categories: intrinsic, general extrinsic, environment, social interaction with teachers, parents, 5th grade first born students were more affected in reading motivation than 5th grade other birth order students. Only social interaction with friends in 5th grade other birth order students is higher than in 5th grade first born students. Although these above comparisons apply in the summed scores among each other groups, it needs more detailed statistical analysis. All statistical analyses were conducted on SPSS. The mean scores, standard deviations in the sample are presented in Table 5.

〈Table 5〉 Means, Standard Deviations for the statistically significant each group

Category /Subtotal	Intrinsic /15	General Extrinsic /20	Environment /30	Social Interaction with Teachers /20	Social Interaction with Parents or Siblings /20	Social Interaction with Friends /20
2nd grade Mean score (Standard deviation)	13.18 (2.205)	17.49 (3.206)	24.96 (4.972)	16.13 (4.039)	15.66 (4.190)	14.25 (4.872)
5th grade	10.46 (3.202)	13.36 (3.957)	19.22 (5.909)	12.70 (4.328)	11.54 (4.289)	11.65 (4.555)
Boys	11.60 (3.116)	15.58 (3.818)	21.69 (6.156)	14.07 (4.518)	13.33 (4.898)	12.86 (5.016)
Girls	12.11 (2.978)	15.36 (4.145)	22.62 (6.136)	14.84 (4.497)	13.96 (4.504)	13.10 (4.771)
First born	11.96 (2.842)	15.18 (3.948)	22.45 (5.978)	14.34 (4.285)	13.67 (4.394)	12.85 (4.804)
Other birth order	11.77 (3.210)	15.69 (3.998)	21.92 (6.289)	14.53 (4.693)	13.62 (4.945)	13.08 (4.964)
2nd grade boys	12.75 (2.650)	17.51 (2.784)	24.51 (5.347)	15.34 (4.498)	15.15 (4.847)	14.03 (5.228)
2nd grade girls	13.64 (1.495)	17.48 (2.779)	25.43 (4.532)	16.97 (3.321)	16.20 (3.310)	14.49 (4.491)
2nd grade first born	13.41 (1.743)	17.41 (2.813)	26.08 (4.485)	16.55 (3.554)	16.29 (3.323)	15.12 (4.146)
2nd grade other birth order	13.06 (2.413)	17.54 (2.765)	24.37 (5.135)	15.91 (4.275)	15.33 (4.564)	13.80 (5.176)
5th grade boys	10.34 (3.117)	13.48 (3.694)	18.63 (5.507)	12.69 (4.146)	11.34 (4.151)	11.58 (4.473)
5th grade girls	10.54 (3.312)	13.26 (4.248)	19.78 (6.305)	12.71 (4.562)	11.71 (4.472)	11.74 (4.696)
5th grade first born	10.94 (3.026)	13.61 (3.891)	19.91 (5.589)	12.80 (4.092)	11.84 (4.134)	11.26 (4.612)
5th grade other birth order	9.91 (3.329)	13.11 (4.066)	18.45 (6.228)	12.58 (4.630)	11.18 (4.486)	12.09 (4.520)

To examine differences in reading motivation between 2nd and 5th grade, boys and girls, first born and other birth order students, 2nd grade boys and girls, 2nd grade first born and other birth order students, 5th grade boys and girls, and 5th grade first born and other birth grade students, two-tailed t test was conducted. For more specific analysis, statistical results are reported in Table 6.

〈Table 6〉 Significant of the t-test for Equality of Means

Variables	Intrinsic (15 score)	General Extrinsic (20 score)	Environment (30 score)	Teacher Interaction (20 score)	Parent Interaction (20 score)	Friend Interaction (20 score)
2nd grade and 5th grade	.000	.000	.000	.000	.000	.000
Boys and Girls	.165	.651	.212	.156	.262	.678
First born and other born	.619	.286	.479	.729	.931	.703
2nd grade boys and girls	.015	.951	.266	.015	.132	.570
2nd grade first born and other born	.379	.792	.050	.373	.158	.100
5th grade boys and girls	.717	.757	.260	.979	.626	.846
5th grade first born and other born	.061	.461	.151	.775	.377	.290

Significant differences were observed in 6 categories of the reading motivation in 2nd and 5th grade students, P 〈 .05. No significant differences between boys and girls were observed in any of the six categories, P 〉 .05. No significant differences between birth order students were observed. Between 2nd grade boys and girls' intrinsic and social interaction with teachers showed significant differences, P 〈 .05. Also, between 2nd grade first born and other birth order students, significant differences were observed in the environment category, P 〈 .05.

5. Discussion

In this study, we see 2nd grade first born students is the highest reading motivation group. Following this group, the group of 2nd grade girls is the next highest group. 5th grade other birth order students is the lowest reading motivation group, and next lowest group is 5th grade boys. Also it shows significant differences based on 2nd and 5th grade in all six categories, in 2nd grade boys and girls in intrinsic and social interaction with their teachers, and in 2nd grade first born and other birth order students in environment category of the reading motivation. Therefore results from this study can be used to planning reading motivation activities that

will support life-long readers for each group of students.

There are many different motivation techniques according to students' grade, gender, birth order and so forth. Gambrell(1996) suggests that the physical environment and social interactions can encourage 1st grade students to read. Her research shows that a book-rich environment and parental support seem to be related to positive effects on students. Also the result of her research suggests four key features to 3rd and 5th grade students: access to books in the classroom, opportunities to self-select books, familiarity with books and social interactions with others about books. Palmer, Codling and Gambrell(1994) discuss four significant motivated factors: prior experiences with books, social interactions about books, book access, and book choice. Teachers, school librarians and parents could consider these factors to their students to motivate reading.

Considering the result about low reading motivation groups, 5th grade boys, 5th grade other birth order students, teachers, parents and educators should make a plan with appropriate ways such as general extrinsic and interaction with friends. The reason is that 5th grade students are more concerned with grading, rewards, self-select books and their own books. According to Ivey & Broaddus(2001) middle school students valued independent reading and the teacher reading out loud as part of instructional time. Thus, it is possible to motivate middle grade students using these techniques. In Table 4, 5th grade boys and 5th grade other birth order students are highly motivated from intrinsic like other groups. Future research should be more targeted toward higher grades and motivation sources from where, who and when they motivate. It will also be important to examine between boy students and motivation source, and higher grade and motivation source.

As mentioned before, every student has a different reading motivation. Teachers should examine each student and some groups of students' reading motivation. Teachers must adjust to each student's concern, interest and level on every educational part. Using the results of the reading survey, I suggest some tips for teachers, parents and students to motivate reading.

- The results of the questionnaire can be sent to each student's parents and classroom teachers. They can identify their child or student's reading motivation, by higher scores on specific items.

- Results of the questionnaire may provide worthy information that can be used to effectively motivate each student. For instance, if a student marks on the question that "I read books to get a teacher's praise" with a high score (strongly agree), the teacher can praise the student more often.

- If many students in a specific class score high on the same questions, the teacher can make some motivation projects, e.g., reading nights, book fairs, or wearing t-shirts that say something like "I am a good reader."
- Specific group students' results may be applied to motivate reading in the group. For example, 2nd grade girls were motivated by social interaction with teachers, following the intrinsic category through Table 4. It gives tips when teachers make a plan to motivate 2nd grade girls to read.
- Different groups of students' responses to the same items may be useful information. Unlike other groups, 5th grade other birth order students are more concerned about social interaction with friends. Teachers can make reading buddy programs and reading mentor-mentee programs to 5th grade other birth order students.

The data presented from this study may differ with other students. Teachers and parents should consider their students' grade, interests and so forth. If this study were followed-up with interviews, observation and other instruments, it would be more valuable. I suggest that teachers and administrators in schools interview students, observe the reading habits of students, and use this or another questionnaire to understand their students and to make a reading motivation plan. It is needless to say that knowing students' interests and opinions about reading motivation is the first step to motivating students to read.

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APPENDIX A. Questionnaire about reading motivation

Questionnaire

Name _____   *Class teacher* _____

Grade: □ *2ʳᵈ*   □ *5th*
Sex: □ *boy*   □ *girl*
Born order : □ *first born child*   □ *second born child*
             □ *third born child*   □ *fourth born child*

Listed below are questions about reading motivation. Please read each statement
carefully. Then check the faces that show how much you agree or disagree with the
statement. Use the following:

(Very happy face) = Strongly Agree   (Happy face) = Agree

(Neutral face) = Undecided

(Unhappy face) = Disagree   (Very unhappy face) = Strongly Disagree

Example: I like reading books.

If you really like reading books, check ☺ - Very happy face (Strongly Agree)

If you like reading books, check ☺ - Happy face (Agree)

If you don't know if you like reading books or not, check ☺ Neutral face (Undecided)

If you don't like reading books, check ☹ - Unhappy face (Disagree)

If you don't like reading books too much, check ☹ - Very unhappy face (Strongly
Disagree)

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1. I read books to want to know something interesting.

☺   ☺   😐   ☹   ☹

2. I read books to learn more.

☺   ☺   😐   ☹   ☹

APPENDIX A. Questionnaire about reading motivation (Cont'd)

3. I read books because I want to be a good reader.

4. I read books to get high scores in language arts, reading, social

   studies, and science.

5. I read books to prepare for the AR (Accelerated Reader) test.

6. I read books to get the coupons from Pizza Hut.

7. I read books to find my name on the good reader lists.

8. I want to read books more during National Book Week

   or School Book fair week, compared to usual days.

9. I want to read books after I check out books

   from school or public library.

10. I want to read books when my parents buy new books for me.

APPENDIX A. Questionnaire about reading motivation (Cont'd)

11. I want to read books after author's visit.

12. I want to read books when I wear a t-shirt or a bracelet that says

" I am a good reader".

13. I want to read books when a library is well decorated and exhibits my

favorite characters.

14. I read books to get a teacher's praise.

15. I want to read books when a teacher reads or introduces books to me.

16. I want to read books when teachers or school librarians give a

recommended book list.

17. I want to read books when my school librarian remembers my name

and asks me "What are you reading?"

18. I read books to get parents' praise.

3

APPENDIX A. Questionnaire about reading motivation (Cont'd)

19. I want to read books after "reading nights" at school,

   when I participate with my parents.

20. I want to read books when my parents read books.

21. I want to read books when my brothers or sisters read books.

22. I read books to get friends' attention/interest.

23. I want to read a book when my friends read a book to me.

24. I want to read books when my friends tell me stories.

25. I want to read books when I meet a reading buddy.

Thank you!

4