

# DIFFERENCES IN BOYS AND GIRLS ATTITUDES TOWARD READING

A COMPARISON BETWEEN SINGLE SEX  
AND COEDUCATION SCHOOLS

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## ABSTRACT

This study aims to replicate a previous investigation conducted in Finland that explored differences in attitudes toward reading and study of boys and girls from 1st and 2nd grade primary schools. In our study we also explore if these differences in attitudes and interests towards reading increase or decrease in single-sex education schools, in comparison with coeducation schools, since we believe that the first allow a better adaptation of the methodology and materials to the psychological characteristics and interests of children.

The investigation was conducted with a sample of 1137 second grade primary students, 533 boys and 570 girls studying in 15 different schools of Madrid: 9 were single sex schools (4 boy's schools and 5 girl's schools), 5 coeducation schools, and 1 school with children of both sexes but in differentiated classrooms. An adaptation of the Finnish questionnaire was used to evaluate children's attitudes towards reading.

From the data collected in this investigation we can draw some important implications for reading policy and practice

and some information that can help us motivate both boys and girls taking into account the multiple differences observed in interests and attitudes towards reading.

## INTRODUCTION

Results of multiple studies, including the latest PISA reports, indicate that, in all countries of the European Union, girls perform better in reading than boys (Watson, Kehler & Martino, 2010; Stevens, 2011; Merisuo-Storm & Soininen, 2012), especially in the area of comprehending narrative text (Schwartz, 2002), and that this lower reading level affects boys performance in all subjects (Sadowski, 2010).

There is evidence that girls regularly outperform boys in every area of literacy: during their first years of life they already differ in their use of oral language during play; in their first years of school boys use a less extended vocabulary than girls and their reading and writing skills are not as good as girls' (Hall & Coles, 1997; Fisher, 2002; Schwartz, 2002; Millard, 2003; Boltz, 2007; Charles, 2007; Twist & Sainsbury, 2009, Logan & Johnson, 2010). Some recent studies even speak of "boy's crisis" in literacy (Stevens, 2011).

Different possible hypothesis have been explored in order to explain consistent gender differences between boys and girls reading attainment: differences in attitudes, in motivational factors, differences in cognitive abilities, differences in brain activation during reading, differences in reading strategies and learning styles (Logan & Johnston, 2010), and mostly gender differences in values, goals and out of school activities.

Differences in attitudes towards reading have been observed in several studies. Some studies have found that girls (aged 10-11) enjoy reading significantly more than boys (Merisuo-Storm 2006). Boys read less than girls, which directly connects to their

level of reading fluency (Sullivan, 2004, Sadowski, 2010). Boys also tend to see themselves as poor readers (Boltz, 2007).

Likewise, research has also shown that children's attitudes towards writing are more negative than those regarding reading. Boys are significantly more reluctant writers than girls (Merisuo-Storm, 2006).

Gender differences in interests have also been observed in several studies: boys tend to engage in reading through different types of literature than girls (Boltz, 2007). Boys are less likely to be committed fiction readers than are girls and that they are more interested in nonfiction and non-print media and tend to lose interest in reading through their years in secondary school (Telford, 1999). Boys tend to read brief informative texts (Schwartz, 2002; Sullivan, 2004; Boltz, 2007). They prefer non-fiction, comics, how-to manuals, graphic novels, sports, fantasy, humor, horror and action books (Schwartz, 2002; Sullivan, 2004; Merisuo-Storm, 2006; Boltz, 2007,) while adventure books are girls favorites (Merisuo-Storm, 2006). Many don't enjoy typical school texts. Also teachers and librarians tend to treat "boy books" as "substandard literature" and this type of texts don't generally make it to the teacher's preferred reading material list.

Some studies indicate that boys read more genres than girls but are more selective (Schwartz, 2002) in terms of whether a book is a boy's book or not. Girls tend to cross gender lines more easily (Merisuo-Storm, 2006). Many boys regard school literacy as "un-masculine" and thus unattractive, but they may use reading for many purposes out of school. They believe that school reading has nothing to do with their interests while reading outside school might involve media, video games, television, internet sites, sport magazines... which are materials based on their own interests (Merisuo-Storm & Soininem, 2012).

Likewise, most pupils, but specially boys, don't like to read aloud, and even when they are fluent readers they feel embarrassed when doing so (Merisuo-Storm, 2006). Hall & Coles

(1997) argue that boys need to be encouraged to read, and that we must be concerned with the consequences of low motivation in boys engagement in reading and learning. Halls & Coles found that boy's competency beliefs and intrinsic motivation towards reading and schoolwork were significantly more closely associated with their level of reading skills, in comparison with girls. Therefore, boy's motivation and beliefs in their ability seem to be more dependent on their success in reading. On the other hand, boy's motivation and competency beliefs may play a more significant role in the effort they put into reading (Logan & Medford, 2011).

On the other hand, some studies have explored the influence of teacher gender on classroom interaction and educational outcomes, and the possible benefits of same gender matching. Some of these studies attribute male underachievement and disaffection from school to the dearth of male role models in teaching, especially at primary level (Carrington & McPhee, 2008). Boys do not have enough male models, which is highly important since attitudes about reading develop early in life (Boltz, 2007).

Likewise, for boys the opinion of their peers is very important. There seems to be negative peer pressure, as boys struggle to be viewed by their peers as masculine, and for them it's very important to feel sure that they don't accidentally pick out a "girl's book". There is evidence that many teenage boys turn off to reading because the recrimination of their classmates "*who associate traditional book literacy with "schoolboys" and "nerds" and who regard reading as uncool*" (Brozo, 2005, pp. 18).

All these studies lead to the conclusion that we must take into account these gender differences. Teachers need to be aware that preferences and interests are not always the same in girls and boys in order to better select books that will help to hook both boys and girls to reading. The teacher has to know what texts appeal to his or her pupils and what kind of exercises they find interesting. Likewise we must have in mind

that children's experiences with literacy during the first years of schooling have far reaching effects. Satisfaction and success in these early experiences will influence considerably their self-concept as learners as well as the attitudes they develop towards study and learning

The goal of the present study is therefore to conduct a further analysis of these gender differences in reading attitudes and motivation and to analyze if some pedagogical alternatives such as the single-sex education, which we believe allows a better adaptation of the methodology and materials to the psychological characteristics and the interests of children, can help promote literacy and positive attitudes and motivation of both boys and girls towards school.

## DEVELOPMENT

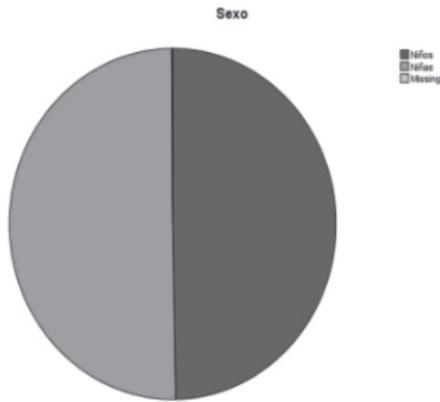
### *Objectives:*

In this study we pursue the following objectives:

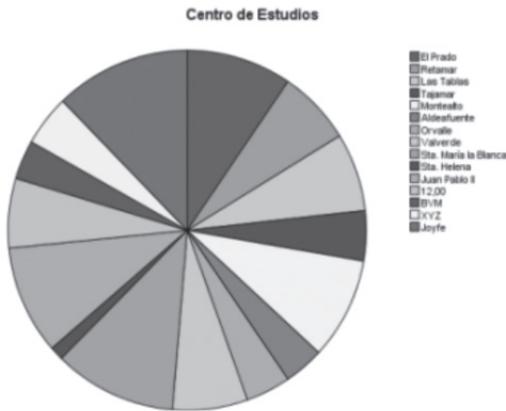
- a) Explore what kind of attitudes boys and girls have towards reading during their first school years.
- b) Explore if reading attitudes and interests differ according to sex.
- c) Analyze what type of materials, activities and methods can be more useful when it comes to motivate boys and girls to read.
- d) Investigate how well are children able to accurately assess their level of reading proficiency and if differences can be found between boys and girls when it comes to estimating their reading competence.
- e) Analyze if these differences are equally observed in single-sex education schools and coeducation schools or if they differ depending on the selected pedagogical model considered.

### *Participants*

The study was conducted with a sample of 1135 second grade primary students, 565 boys (50.2%) and 570 girls (49.8%) studying in 15 different schools of Madrid: 10 were in single sex classes: 5 boy's classes (31.1%) and 5 girl's classes (31%) and 5 coeducation classes (37.9%). Some of the schools were private schools (46.5%) and some were sustained with public funds (53.5%).



Sex distribution



Schools participating

SINGLE SEX EDUCATION  
AN OPTION IN FOREFRONT OF EDUCATION



Pedagogical model

*Instruments:*

An adaptation of the questionnaire used in the Finnish study (Merisuo-Storm & Soininen, 2012) was employed. The original questionnaire included 22 questions which assessed four different aspects: 1) attitudes toward reading; 2) attitudes towards studying; 3) attitudes towards social reading and 4) feeling of reading competence. The scale used was a Likert type 1-4. This instrument was reported to have a good internal consistency with Cronbach's Alpha of .89 (Merisuo-Storm & Soininen, 2012).

This questionnaire was translated and adapted to Spanish and subjected to review by a group of experts, 5 university teachers of English Philology. Likewise 10 primary school teachers were invited to review the questionnaire. They were asked to make comments on the appropriateness of the questions, their relevance, as well as to point out those questions which they considered should be modified or included to improve it. As a result of this review, the final questionnaire used was composed of 26 questions; four new questions were added to the original questionnaire. Questions were expressed in such a manner as to be unambiguous and easy to understand. When answering each question the student had to tick one of

the four faces placed below the question depending on which best illustrated his or her opinion about the asked matter.



In this questionnaire, questions 1 to 4 and item 12 explore the opinion children have towards reading and their enjoyment of reading. Questions 5 to 10 explore the type of reading materials preferred by the children evaluated. Questions 13 to 16 ask about learning to read and attitudes toward studying. Questions 17 to 21 evaluate opinions about social reading. Finally questions 22 to 26 ask about student's feeling of reading competence.

In general terms, a low score in the questionnaire indicates more positive attitudes towards reading while high scores are associated with negative attitudes and dislike of reading.

## RESULTS

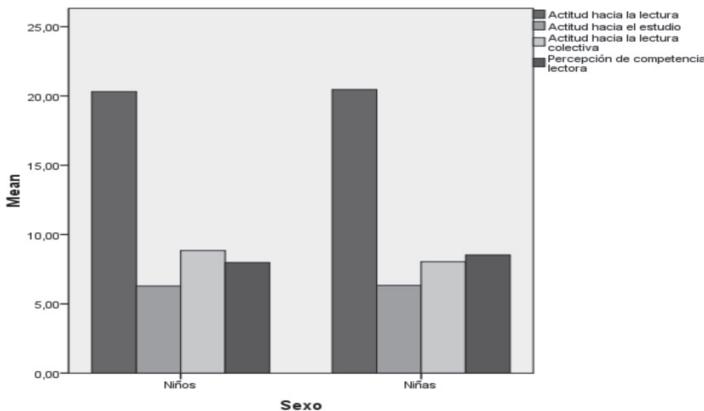
*Reliability of the scale:* The reliability of the scale was calculated obtaining an  $\alpha = .80$ , indicating a high reliability of the questionnaire, similar to the one obtained in the original study.

*Attitudes towards reading:* No significant differences were found between boys and girls in their general attitude towards reading, result of the sum of all items of the questionnaire ( $F = 1.37; p = .242$ ). These results differed of those obtained in the Finnish study (Merisuo-Storm & Soininen, 2012) who

found that girls had significantly more positive attitudes towards reading than boys.

No differences were found either in the global score of the questionnaire when the variable sex and the variable pedagogical model (coeducation, single sex male and single sex female) were combined. Therefore, overall scores on the scale are quite similar in boys and girls independently of whether they study in a single sex or a coeducation school ( $F = .677$ ;  $p = .888$ ) indicating that gender differences in global attitudes towards reading are not affected by the type of pedagogical model in which the student studies.

However significant differences according to sex were found in some of the dimensions evaluated through the questionnaire subscales. In particular, of the 4 sub-dimensions considered, significant differences between boys and girls were found in *social reading* ( $F = 24.69$ ;  $p < 0.001$ ) indicating that girls have a more positive attitude towards reading aloud and shared reading, while boys are more reluctant to this type of social reading. Also differences in the fourth dimension of the scale, *perception of reading competence*, almost reached significance, ( $F = 3.33$ ;  $p = .068$ ), pointing out that boys usually have a better image of themselves as readers and feel they are more proficient readers than girls.



*Differences between boys and girls in some items of the questionnaire:*  
If we examine each item of the scale separately, significant differences between boys and girls can be observed in many of the items evaluated through the questionnaire:

**Girls consider easier or have a significantly more positive attitude in the following items**

Item	t	Sig
4. Do you like to listen when someone is reading aloud?	-5.54	.001
5. Do you like to read storybooks?	6.87	.001
8. Do you like books to have a lot of pictures?	3.84	.001
9. Do you like the characters in the stories to be good and happy?	7.80	.001
12. Do you like to go to the library?	3.31	.001
17. Do you like to talk with your friends about the books you read?	2.77	.001
18. Do you like to do exercises together with another student?	3.73	.001
19. Do you like to read aloud in class?	3.99	.001
21. Do you like to read together with another student?	3.20	.001

**Boys consider easier or have a significantly more positive attitude in the following items**

Item	t	Sig
2. Do you like to read comics?	-9.91	.001
6. Do you like to read non-fiction books such as books about animals, experiments, records, sports?	-4.079	.001
7. Do you like to read adventure books?	2.42	.016
10. Do you like characters in the stories that are evil and scare you?	-11.09	.001
15. Do you like to do exercises and activities about the things you read?	2.71	.006
23. Did you find learning to read easy?	-3.28	.001
25. Do you understand well the words you read?	3.17	.002
26. Do you find it easy to remember what you read in school?	2.87	.004

**No significant differences were found between girl and boys in the following items**

Item	t	Sig
1. Do you like to read books?	1.21	.228
3. Do you like getting books as a present?	1.45	.148
11. Do you like to read at home in your spare time?	.298	.766
13. Did you like to learn to read?	.057	.955
14. Did you like to learn to write?	.648	.517
16. Do you like doing homework?	.597	.551
20. Do you like telling about a book to other students?	1.46	.145
22. Is reading easy for you?	1.82	0.06
24. Do you find it easy to understand the books you read in school?	.343	.956

## POSITIVE ATTITUDES

We will examine now which items of the questionnaire are related with a most positive attitude (Mean <1.40):

In boys most positive attitudes are shown specially in item 6 (Mean= 1.24) which indicates that boys show a very positive attitude towards nonfiction reading, such as books or magazines about animals, experiments, records or sports.

In girls, most positive attitudes are shown in item 9 (Mean=1.35), and item 18 (Mean=1.28); therefore girls enjoy mostly those stories whose main characters are good friendly and happy (item 9) and specially enjoy working and doing activities together with their classmates (item 18).

In both girls and boys very positive attitudes are shown in item 3 (Mean= 1.39/1.33), item 7 (Mean=1.24/1.33) item 13 (1.29/1.29), item 14 (Mean=1.30/1.29) and item 22 (Mean =1.26/1.33), indicating that both girls and boys declare positive attitudes towards getting books as a present (item 3) , reading adventure books (item 7), learning to read (item 13), learning to write (item 14) and consider that learning to read was easy.

## NEGATIVE ATTITUDES

We will examine now some of the items that cause more rejection or more negative attitudes (Mean >2).

In boys those items most rejected were item 4 (Mean=2.035) and item 19 (Mean 2.087); therefore boys dislike specially listening when someone is reading aloud as well as reading themselves aloud.

In girls the items most rejected were item 2 (Mean 2.33), 10 (Mean=2.56) & 26 (Mean= 2.10), which indicate that girls dislike specially reading comics, reading books in which the characters are bad or fearsome, and find it often difficult to remember what they read in school.

Both girls and boys disliked particularly item 16 (Mean 2.096/2.136), which refers to doing homework.

## CORRELATION BETWEEN VARIABLES

If we consider together or group those items that ask about the “enjoyment of reading” (items 1,3,4,11) and analyze whether there are gender differences, we can observe that there are significant differences between boys and girls, showing that girls significantly tend to enjoy reading more than boys ( $t = .61, p > .001$ ).

Likewise, our data reveal a clear correlation between the enjoyment of reading (items 1,3,4 and 11) and the feeling of competency in reading (items 22,23,24,25 and 26). This significant correlation can be observed both when considering the whole group of students ( $r = 2.90; p < .01$ ), and also when we consider separately boys ( $r = .264; p < .001$ ) and girls ( $r = .353, p < .001$ ), and also when considering separately those students enrolled in single sex schools and in coeducation ( $r = .307; p < .001$ ).

A positive correlation can also be observed between the image that the child has of himself as a reader and the enjoyment of social or group reading (items 19, 20 and 21). Those children that consider themselves as good readers are more inclined towards social reading.

Finally, if we group those items that refer to attitudes towards learning and study (items 13,14,15 & 16), no significant differences between boys and girls are observed ( $t = -.609, p = .543$ ).

## CONCLUSIONS:

From the data collected in this investigation we can draw some important implications for reading policy and practice

and some information that can help us motivate both boys and girls taking into account the multiple differences observed in interests and attitudes towards reading.

Though in our study, unlike the Finnish study (Merisuo-Storm, 2012), no significant differences in global attitudes towards reading were found between boys and girls, multiple differences were observed in some variables such as interests in reading, type of reading materials preferred and self-concept.

Boys tend to find interest in different types of literature than girls. Boys prefer non-fiction books, comics, adventures and sports magazines ... For them reading must be related with their outside of school interests. They tend to read brief, informative texts they also enjoy adventure, humor, horror and those stories with fearsome villains and evil characters. Therefore, boys don't enjoy typical school texts and this might lead to a lower reading level which can affect their performance in all subjects (Sadowski, 2010).

When teaching boys, as teachers we must broaden our reading repertoire including non-fiction books and reading for practical purposes such as learning to use an electronic device, finding information about a voyage to another country, etc. Likewise we must also learn to take advantage of internet and computer reading such as hypertext and multi-media reading which appeals specially to boys (Stevens, 2011). Allowing students to help arrange the classroom library choose reading materials, including more nonfiction and humorous books, and allowing time for free or voluntary reading might help to involve boys in reading (Boltz, 2007). Fantasy books with strong characters who fight evil, and lots of action, such as Harry Potter books, might also appeal to boys (Stevens, 2011).

Boys also need men as positive reading role models in order to assume that reading is not uncool or unmasculine.

Likewise our study shows that the confidence and experience that most boys feel they have as private readers is often at odds with their dislike of social or public reading and reading

discussion with their peers. Similar results have been observed in other studies (Telford, 1999, Merisuo-Storm, 2006). We need to involve boys in class discussions, and written discussions in pairs or small groups, in storytelling and read-alouds choosing materials that can engage and interest boys.

On the other hand, although our study shows that girls enjoy reading more than boys, and that they are more interested in fiction books and books that reflect emotions and positive feelings (characters which are good and happy), some authors indicate that many of the books that interest girls are superficial like fanzines and romance (Charles, 2007). As they increase their reading competence and enjoyment in reading, girls should be moved toward better quality of reading materials (Stevens, 2011).

Our study therefore confirms that preferences and interests are not always the same in boys and girls. As teachers, we must try to uncover the interest of each of our students. We believe that single sex education might help cater to boy's and girl's natural interests and strengths and therefore facilitate motivation towards reading. It is only by taking differences seriously and analyzing current highly gendered practices that competent and critical readers, of both sexes can be developed.

Likewise, our study demonstrates that these differences between boys and girls don't disappear in coeducation schools, therefore teachers must be aware of these differences and provide students with real choice of books.

Finally from our study we can also conclude that there is a close correlation between enjoyment of reading and reading competency beliefs, Girls seem to feel less self-confident as readers and second grade boys assess their reading skills higher than girls. Both find most difficult *remembering the contents of the texts they read in school*. Teachers have an important role in the development of a positive self concept of children. In all cases, but specially when teaching girls, teachers must be careful to provide positive experiences and encouraging feedback

to help girls become more confident with reading during their first school years, since achievement beliefs are especially important in further years when tasks and reading becomes more challenging.

## REFERENCES

- Boltz, R. (2007). What we want: Boys and girls talk about reading. *School Library Media Research*, 10.
- Brozo, W. (2005). Gender and reading literacy. *Reading Today*, 22 (4), 18.
- Carrington, B. &. (2008). Boy's underachievement and the feminization of teaching. *Journal of Education for Teaching International Research and Pedagogy*, Volume 34, Issue 2, 109-120.
- Charles, C. (. (2007). Exploring "girl power": Gender, literacy and the textual practices of young women attending an elite school. *English Teaching Practice & Critique*, 6 (2), 72-88.
- Davies, J. &. (1993). Comics or Stories? Differences in the reading attitudes and habits of girls and boys in years 2,4 and 6. *Gender and Education*, 5 (3), 305-320.
- Fisher, R. (2002). Boys into writing: raising boy's achievement in writing. En M. Williams, *Unlocking writing: A guide for teachers* (págs. 141-157). London: David Fulton Publishers.
- Hall, C. &. (1997). Gendered readings: Helping boys develop as critical readers. *Gender & Education*, 9 (1), 61-68.
- Logan, S. &. (2010). Investigating gender differences in reading. *Educational Review*, 62 (2), 175-187.
- Logan, S. &. (2011). Gender differences in the strength of association between motivation, competency beliefs and reading skills. *Educational Research*, 53 (1), 85-94.
- Merisuo-Storm, T. &. (2012). Young boy's opinions about reading, literacy lessons and their reading competende. *Proceedings of the ICERI 2012 Conference*, (págs. 4109-4118). Madrid, Spain.

- Merisuo-Storm, T. (. (2006). Girls and boys like to read and write different texts. *Scandinavian Journal of Educational Research* , 50 (2), 111-125.
- Merisuo-Storm, T. (2007). The development of writing skills of boys and girls during the first six school years. *Nordisk Pedagogik* 27 (4), 373-385.
- Millard, E. (2003). Gender and early childhood literacy. En J. L. N.Hall, *Handbook of early childhood literacy* (págs. 22-33). London: SAGE Publications.
- Sadowski, M. (2010). Putting the “boy crisis” in context. *Education Digest: Essential Readings Condensed for Quick review*, 76 (3), 10-13.
- Schwartz, W. (2002). *Helping underachieving boys read well and often*. New York: ERIC Digest .
- Stevens, S. (2011). Entering bookworld: How to help both Boys and Girls in Class Read Alouds. *Teacher as Leader, EDU 600*, 1-9.
- Sullivan, M. (2004). Why Johnny wont read. *School Library Journal*, 50 (8), 36-39.
- Telford, L. (1999). A study of boy’s reading. *Early child development and care*, 149 (1).
- Watson, A. K. (2010). The problem of boy’s literacy underachievement: raising some questions. *Journal of Adolescent & Adult Literacy*, 53 (5), 356-361.