

**Three home literacy environment domains and their relations
to boys' and girls' reading attitude.**



**Master Thesis
Education and Child Studies
Leiden University
April 2010**

Student: Alexandra Elias (s 9752676)

Supervisor: mw. drs. V.A.C. van der Kooy-Hofland

Second reader: mv. drs. N.J. de Ronde-Davidse

Foreword

When I was considering subjects for my master thesis, I got very enthusiastic on the ongoing research project led by Drs. Verna van der Kooy investigating children's reading attitude. Having two young children myself, I was keen to learn more about this subject. I am therefore grateful to Drs. Verna van der Kooy for providing me the opportunity to write my master thesis on this project, and I would like to thank her for her constant support, constructive feedback and encouragement.

I now hope to transfer all my knowledge into practice with my own children and in my professional life.

TABLE OF CONTENTS

ABSTRACT	2
INTRODUCTION	2
METHOD	5
<i>Subjects</i>	5
<i>Questionnaire</i>	5
<i>Measures</i>	6
RESULTS	8
DISCUSSION	13
CONCLUSION	15
REFERENCES	16
APPENDIX	19
<i>APPENDIX A: HLE questionnaire</i>	19
<i>APPENDIX B: Reading Attitude questionnaire</i>	27

ABSTRACT

In order to extend knowledge on the influence of a rich home literacy environment (HLE) on children's reading attitude, this study investigated the unique effect of three predefined HLE domains (frequency of shared storybook reading, parents' exposure to literacy and number of books at home) on boys' and girls' reading attitude. The data, previously gathered for another study by means of standardized questionnaires, was used and counted 256 children from the Netherlands. A rich home literacy environment was a predictor for a positive reading attitude, however boys' reading attitude was slightly more influenced by it than girls. Girls' reading attitude was especially influenced by the frequency of shared storybook reading, whereas boys' reading attitude was mainly triggered by the number of books at home. Parents' exposure to literacy had a significant negative effect on the reading attitude of both genders.

INTRODUCTION

Consider that reading skill serves as the major avenue to learning about other people, about history and social studies, the language arts, science, mathematics, and the other content subjects that must be mastered in school. When children do not learn to read, their general knowledge, their spelling and writing abilities and their vocabulary development suffers in kind. Within this context, reading skill serves as the major foundational skill for all school-based learning, and without it, the chances for academic and occupational success are limited indeed.

This statement from Lyon (1998) briefly summarizes the importance of reading skill. Reading is valuable for our personal development, and for our social, economic and civic life (Holden, 2004). Therefore, fostering good reading skills seems to be a goal of major priority for parents and educators.

The question is: how can good reading skills be achieved? Researchers commonly agree that reading attitude is the key factor in reading success. A positive reading attitude develops a tendency to read on a regular basis (Baker, Scher, & Mackler, 1997). Also, young children who enjoy reading tend to become good readers. Poor readers, by contrast, are often not motivated to read (Morgan & Fuchs, 2007). In other words, a positive reading attitude directly enhances children's reading skills. Taking all these facts into account, it seems clear

that developing motivated readers is a major goal for programs of reading instruction (Morrow, 1983).

Now that the value of a positive reading attitude is justified, the interest on the role of parents in encouraging and enhancing such an attitude has risen. Former studies have examined the relation between home literacy environment and reading attitude, and results revealed that they indeed correlate with each other (e.g. Baker & Scher, 2002; Sénéchal, 2006; Whitehurst & Lonigan, 2001; Yaden, Rowe, & McGillivray, 2000; Zhou & Salili, 2008). For example, shared storybook reading plays an important role in developing a positive reading attitude (Sénéchal, 2006) and children who grow up in an literate environment are more likely to enjoy reading later on (Kubis, 1994). Moreover, children who are surrounded by adults who read for pleasure take it for granted that reading is a worthwhile activity (Csikszentmihalyi, 1991). Therefore, taking all these studies into account, it can be assumed that parents and the home environment are essential to children's early engagement to read.

Home literacy environment is often considered as a whole, but it is actually multidimensional and consists of different domains, such as the number of books at home, the frequency and quality of shared book reading, and the parents' own reading habits (Saracho, 1997). Looking at the different home literacy environment domains (the HLE domains), they all correlate on their own way to reading attitude. For example, Bintz (1993) identified the presence of positive role models as one of the factors responsible for children's interest in reading. According to Kubis (1994), students who were read to as children had a more positive attitude toward reading than those who did not.

Next to the effect of the HLE domains on reading attitude, the gender difference on reading attitude has been explored by several studies (e.g. Kush & Watkins, 1996; Logan & Johnston, 2009; McKenna, Kear, & Ellsworth, 1995; Morrow, 1983; Wigfield & Guthrie, 1997). These studies converged in their outcomes, that is boys and girls differ in their motivation, with girls showing by nature more positive motivation for reading than boys.

In this study, the author took a closer look at three specific HLE domains, namely the domains frequency of shared storybook reading, parents' exposure to literacy and number of books at home, and examine how each of them separately influences boys' and girls' reading attitude. This is of particular interest as no previous studies have looked at the unique contribution of these HLE domains on both genders, therefore this question deserves consideration. Since home literacy environment has an important influence on reading attitude, this study could provide some interesting information and may help parents and

educators to prioritize the actions facilitating a positive reading attitude. Moreover, if the influence of HLE domains differs between boys and girls, this knowledge would help to be responsive to boys' and girls' different needs.

The first aim of this study was to examine to what extent home literacy environment is related to reading attitude. As previously noted, former studies provided evidence that home literacy environment does relate to reading attitude. It was therefore expected that home literacy environment would have a positive effect on reading attitude in this study as well.

Secondly, this study looked at the unique influence of three specific HLE domains (frequency of shared storybook reading, parents' exposure to literacy and number of books at home) on reading attitude. Although all three domains may contribute to a positive reading attitude, it was expected that the factor frequency of shared storybook reading would have the most powerful effect on reading attitude in this study. This outcome was predicted as results of previous studies describing the importance of intrinsic motivation as well as the importance of a social interactive environment for a positive reading attitude. With regard to the importance of intrinsic motivation, Wigfield (1997) identified intrinsic motivation and extrinsic motivation as two dimensions of reading motivation. Intrinsic motivation refers to engagement in an activity that is based on personal interest in the activity itself. By contrast, someone is extrinsically motivated when the action is engaged in response to external demands (Ryan & Deci, 2000). For example, when children read in order to meet parents' expectations, they are extrinsically motivated because the reason of their desire to read is controlled externally (Hidi, 2000). Research has shown that intrinsic but not extrinsic motivation predicts a positive reading attitude (e.g. Cox & Guthrie, 2001; Wang & Guthrie, 2004). Concerning the importance of a social interactive environment, an environment where students are encouraged to discuss and share books with friends (as opposed to reading individually) increases the students' intrinsic motivation to read (Guthrie, Shafer, Wang, & Afflerbach, 1995; Turner, 1995; Morrow, 1996). Taking into account the importance of intrinsic motivation and the importance of a social environment for enhancing a positive reading attitude, it was expected that the factor shared storybook reading would have the strongest effect on reading attitude compared to the factors number of books at home and parents' exposure to literacy. Shared storybook reading offers a social interaction between parents and children, whereas the factors number of books at home and parents' exposure to literacy does not supply any social contact.

The third goal of this study was to look at the gender difference on the influence of home literacy environment on reading attitude. In order to answer this question, we first examined

whether girls significantly differed from boys in their reading attitude. As already mentioned, girls tend to be more voluntary readers and hold more positive attitude about reading than boys (Kush & Watkins, 1996; Logan & Johnston, 2009; McKenna et al., 1995; Morrow, 1983; Wigfield & Guthrie, 1997). Taking this into account, it was expected that a rich home literacy environment would have more effect on boys than on girls.

Moreover, this study looked at the effect of each HLE domain individually on both genders.

In order to explore these questions, an existing dataset primary used for other purposes was used.

METHOD

Subjects

The subjects were grade 2 children and their parents who have participated since they were in kindergarten to a large longitudinal research project led by Drs. V. van der Kooy. From the 405 parents who were present at the start of the longitudinal study, 361 were still participated when the children were in grade 2. All parents received the Home Literacy Environment questionnaire (the HLE questionnaire), and 275 of them completed the questionnaire. Parents and children (133 boys and 142 girls) were all native Dutch and came from 15 schools in the region of Delft (The Netherlands). Children's age at the time of the questionnaires' administration was between 7 and 8 years old.

Questionnaire

Parents completed the HLE questionnaire, which was administered between December 2008 and January 2009 (Appendix A). The HLE questionnaire contained 19 questions concerning the parents' reading behaviour, the number of books at home, the frequency of reading to their child, their child's age when they started storybook reading and their child's reading behaviour. The HLE questionnaire also contained a list with authors of adult books, a list of authors of children's books and a list of titles of children's books to check parents' literature knowledge. All lists contained foils in order to prevent guessing.

In November 2008 the children completed the reading attitude questionnaire (Appendix B). The Reading Attitude questionnaire is a slightly adapted version of the Reading Attitude questionnaire created by Aarnoutse (1991). It contains 19 yes/no questions which measure the children's attitude towards reading within several situations (school, home, holiday etc.). This questionnaire provides a valid evaluation of the children's general reading attitude ($\alpha = .84$).

Finally, in order to measure the child's IQ (used as control variable in this study), the results of the Peabody Picture Vocabulary test (PPVT) were used (administered in November 2008), which test the receptive vocabulary of children. The reliability (λ_2) of the PPVT for age 4-9 ranges from 0.92-0.95 (Schlichting, 2005).

Measures

At the start of this present study, a factor analysis on the HLE questionnaire was conducted and three HLE domains were tapped: the factors parents' exposure to literacy, frequency of shared storybook reading and number of books at home. Table 1 provides a list of items within the three HLE domains. The factor frequency of shared storybook reading needs further explanation: due to the fact that the question *'How often do you read storybooks to your child'* did not seem to be reliable (the high total score on this question may indicate socially desirable answers), the list testing the parents' knowledge of authors of children's books is used to measure this component. This is an alternative approach developed by Sénéchal, Lefevre, Hudson, & Lawson (1996) that avoids the problems associated with parents' reports of how frequently they read to their children, whose answers could be biased, as storybook reading is considered as a highly valued activity.

Table 1
Items within the three HLE domains.

Parents' exposure to literacy^a

1. Do you read (a) newspaper(s)?
2. Can you name a newspaper you read?
3. Do you read (an) informative magazine(s)?
4. Can you name an informative magazine you read?

Frequency of shared storybook reading

1. Which authors of children's books do you recognize from the following list?^b

Number of books at home

1. How many books do you have at home?
-

^a Alpha Cronbach = .67

^b see HLE questionnaire in appendix 1 for the complete list of authors of children's books.

This being done, the assumptions permitting a regression analysis and an independent t-test were checked: assumptions of normality of sampling distributions, linearity and normal distribution of residuals were evaluated. Also, the independency (collinearity check) of the three independent variables was examined.

After the data-inspection, a hierarchical regression analysis was conducted in order to measure the effect of all HLE domains together and of each of them separately on reading attitude. Then, an independent t-test was carried out to evaluate whether boys and girls differed in their reading attitude. Finally, a hierarchical regression analysis with a split file on gender was done to measure the effect of each HLE domain on boys' and girls' reading attitude.

RESULTS

In this section, results of the data-inspection are presented, followed by the results of the data analyses.

The main outcomes from the descriptive statistic of the variables used in the regression analysis are reported on Table 2. The variables turned out to have a normal distribution. On average, parents had between 101 and 200 books at home. From the list with authors of children's books (measuring the factor frequency of shared storybook reading), parents recognized on average 12% of them. Their reading attitude was above average, although the standard deviation was quite large.

Table 2
Descriptive statistics.

Variable	N	Minimum	Maximum	M	SD
Parents' exposure to literacy ^a	256	-2.10	0.94	-.02	1.01
Number of books at home ^b	256	1	5	3.96	1.00
Frequency of shared storybook reading	256	0	21	7.04	3.95
Reading attitude	256	5.26	100	65.43	23.55

^a Negative scores are due to the fact that this factor is a composite z-score.

^b 1 = 0-10; 2 = 11-25; 3 = 26 -100; 4 = 101-200; 5 = meer dan 200.

Correlational analyses were first conducted to examine correlations among variables. Table 3 shows a matrix of correlations based on Pearson's *r*. Statistically significant positive correlations were obtained between reading attitude and the factor number of books at home. Also, the correlation between reading attitude and the factor frequency of shared storybook reading was positive and significant. The factor parents' exposure to literacy had a negative non-significant correlation with reading attitude. According to Cohen's classification (Cohen, 1988), all correlations between reading attitude and HLE domains were small.

Table 3
Correlations between HLE domains and reading attitude.

	PEL	NBH	FSR	RA
Parents' exposure to literacy (PEL)	---	.20**	.23**	-.11
<i>N</i>	256	256	256	256
Number of books at home (NBH)		---	.35**	.18**
<i>N</i>		256	256	256
Frequency of shared storybook reading (FSR)			---	.18**
<i>N</i>			256	256
Reading attitude (RA)				---
<i>N</i>				256

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

A regression analysis was conducted to measure the effect of each HLE domain on reading attitude. The first block of the regression contained PPVT and gender (used as control variables). The second block contained the factor frequency of shared storybook reading as it was expected to be the most important predictor of reading attitude. As parents' exposure to literacy did have a non-significant correlation with reading attitude, this factor was expected to be a weak predictor of reading attitude. For this reason, this factor was entered as last (fourth block) in the regression. The factor number of books at home was entered in the third block. The results are given in Table 4. The total model (model 4) including the two control variables and the three HLE domains explained 18 % of the variance on reading attitude ($F(5,255) = 11; p = .00$).

Looking at the results in more detail, the findings in model 1 shows that PPVT did not have any significant effect. It can therefore be assumed that PPVT does not affect the results. Regarding the control variable gender, it explained a significant 11% unique variance in reading attitude, which is the highest unique variance explained from all predictors. When the factor frequency of shared storybook reading was entered in model 2, another 2% unique variance was explained. The factor number of books at home entered in model 3 explained a significant 2% unique variance. Model 4 assessed the contribution of the factor parents' exposure to literacy, and it revealed that it explained another 3% of variance. Important is to notice that the factor parents' exposure to literacy had a significant but negative effect on reading attitude.

Table 4

Regression analysis testing the relation between HLE domains and reading attitude.

Model		b	SE	β	<i>t</i>	p	R^2	ΔR^2	ΔF	<i>p</i>
Model 1	Constant	41.65	4.51		9.23	.00				
	PPVT	1.42	1.41	.06	1.00	.31				
	Gender	15.56	2.81	.33	5.53	.00	.108	.11	15.37	.00
Model 2	Constant	36.04	4.97		7.25	.00				
	PPVT	0.60	1.43	.03	0.42	.67				
	Gender	15.00	2.79	.32	5.37	.00				
	FSR	0.92	0.36	.15	2.58	.01	.131	.02	6.64	.01
Model 3	Constant	23.66	7.13		3.32	.00				
	PPVT	0.29	1.42	.01	0.20	.84				
	Gender	15.31	2.77	.32	5.53	.00				
	FSR	0.62	0.38	.10	1.65	.10				
	NBH	3.55	1.48	.15	2.40	.02	.151	.02	5.75	.02
Model 4	Constant	19.81	7.14		2.78	.01				
	PPVT	0.29	1.40	.01	0.20	.84				
	Gender	15.38	2.72	.33	5.64	.00				
	FSR	0.82	0.38	.14	2.16	.03				
	NBH	4.13	1.47	.17	2.81	.00				
	PEL	-4.17	1.39	-.18	-3.01	.00	.180	.03	9.05	.00

Note:

Dependent variable: Reading attitude;

FSR: Frequency of shared storybook reading; **NBH:** Number of books at home; **PEL:** Parents' exposure to literacy;

N = 256

The next step of the analysis was to check whether the influence of HLE domains on reading attitude differed between boys and girls. Before examining this, the relation between each gender and reading attitude was evaluated. Results of the previous regression analysis (Table 4) indicated that gender accounted for significant variance on reading attitude. It can therefore be presumed that gender has influence on reading attitude. The results of an independent t-test testing girls' and boys' mean difference showed that on average girls had a more positive reading attitude ($M = 70.96$, $SE = 21.21$) than boys ($M = 56.36$, $SE = 24.61$). This difference was significant ($t(350) = 4.071$, $p < 0.5$). The effect size of this mean difference was medium ($d = 0.63$).

A regression analysis with a split file on gender was conducted to examine the influence of HLE domains on reading attitude for both genders. The results showed a small but significant influence of HLE domains on both genders. The significance and magnitude of the effect was slightly more important for boys than for girls (boys: $R^2 = .093$, $F(4,121) = 2.99$, $p = .02$; girls: $R^2 = .082$, $F(4,133) = 2.89$, $p = .02$). There is thus a significant gender difference on the influence of HLE on reading attitude in favor of boys.

Examining the data in more detail (Table 5), PPVT (controlling IQ) did not explain any variance for both genders. The factor frequency of shared storybook reading did explain a small but significant unique variance for both genders (boys: 2%; girls: 3%). The effect (β) of this factor was significant for girls but non-significant for boys. When the factor number of books at home was entered in model 3, it predicted 4% of unique variance for boys against 1% of unique variance for girls. The effect of the factor number of books at home was significant for girls and non-significant for boys. In other words, the factors frequency of shared storybook reading and number of books at home positively predicted a small variance of boys' and girls' reading attitude, however the effect of the factor frequency of shared storybook reading was only significant for girls and the factor number of books at home had only a significant effect for boys. The remaining factor parents' exposure to literacy entered in model 4 explained 3% of unique variance for boys and girls. It had a significant negative effect on reading attitude for both genders.

Table 5

Regression analysis testing the contribution of HLE domains on reading attitude by gender.

Gender	Model		b	SE	β	<i>t</i>	p	R²	ΔR^2	ΔF	<i>p</i>
Boys	Model 1	Constant	57.33	2.17		26.41	.00				
		PPVT	0.73	2.23	.03	0.32	.74	.001	.00	0.11	.74
Girls		Constant	72.81	1.83		39.77	.00				
		PPVT	1.98	1.79	.01	1.10	.27	.009	.00	1.22	.27
Boys	Model 2	Constant	51.22	4.24		12.07	.00				
		PPVT	-0.11	2.27	-.00	-0.05	.96				
		FSR	0.91	0.55	.15	1.67	.10	.024	.02	2.79	.10
Girls		Constant	65.99	3.90		16.93	.00				
		PPVT	1.18	1.82	.06	0.65	.52				
		FSR	0.94	0.47	.17	1.98	.05	.038	.03	3.91	.05
Boys	Model 3	Constant	34.59	8.62		4.01	.00				
		PPVT	-0.82	2.26	-.03	-0.36	.72				
		FSR	0.45	0.58	.07	0.77	.44				
		NBH	4.99	2.26	.22	2.20	.03	.062	.04	4.86	.03
Girls		Constant	58.09	7.66		7.58	.00				
		PPVT	1.06	1.82	.05	0.59	.56				
		FSR	0.76	0.50	.14	1.52	.13				
		NBH	2.34	1.98	.11	1.20	.23	.048	.01	1.43	.23
Boys	Model 4	Constant	30.88	8.72		3.54	.00				
		PPVT	-0.53	2.24	-.02	-0.24	.81				
		FSR	0.69	0.59	.12	1.18	.24				
		NBH	5.45	2.25	.24	2.42	.02				
		PEL	-4.25	2.15	-.18	-1.97	.05	.093	.03	3.90	.05
Girls		Constant	54.52	7.73		7.05	.00				
		PPVT	0.86	1.80	.04	0.48	.63				
		FSR	0.90	0.49	.16	1.83	.07				
		NBH	2.97	1.95	.13	1.52	.13				
		PEL	-3.97	1.82	-.19	-2.18	.03	.082	.03	4.76	.03

Note: Dependent variable: Reading attitude;

FSR: Frequency of shared storybook reading; **NBH:** Number of books at home; **PEL:** Parents' exposure to literacy;

Boys: *N* = 122; Girls: *N* = 134.

DISCUSSION

This present study was conducted with three goals in mind. First, this study validated previous studies on the positive effect of a rich home environment. Secondly, it appeared that all three examined HLE domains had a significant effect on reading attitude, however the factor parent's exposure to literacy had a significant negative effect. Finally boys appeared to be slightly more influenced by a rich home literacy environment than girls, and, interestingly, both genders were motivated by different HLE domains. These results are discussed consecutively.

The results from this study supported previous research (e.g. Baker & Scher, 2002; Sénéchal, 2006; Whitehurst & Lonigan, 2001; Yaden, Rowe, & McGillivray, 2000; Zhou & Salili, 2008) in suggesting that children who have more opportunities to engage in activities related to literacy at home and have a rich home literacy environment have more positive views about reading. However, although the variance explained was significant, only 7% of the total variance was explained by the three predefined HLE domains. In the light of these findings we need to keep in mind that HLE does only have a small effect on the prediction of reading attitude.

When the unique variance of each HLE domain was investigated, both the factor frequency of shared storybook reading and the factor number of books at home appeared to contribute for more or less the same amount of variance. Unlike the expectation, the present study did not provide evidence that the factor frequency of shared storybook reading enhance children's reading attitude more than the factor number of books at home. The importance of social interaction which should, according to several studies (Guthrie, Shafer, Wang, and Afflerbach, 1995; Turner, 1995; Morrow, 1996), increase intrinsic motivation to read was therefore not confirmed with the factor frequency of storybook reading in the present study. For that reason, this hypothesis needs to be rejected. A possible justification for these findings is that children's reading attitude cannot only be promoted by the social contact provided during shared storybook reading, but by a combination of factors related to a rich home environment, including a broad range books at home. With regard to the factor parents' exposure to literacy, it had surprisingly a negative effect on reading attitude. A possible interpretation of this negative relation is that the factor parents' exposure to literacy, which measures the parents' reading habits of novels and informative books, had the same negative effect on children's reading attitude as basic skills books (ABC books) in the study lead by

Baker & Sher (2002). In their study, ABC books were significantly negatively associated with children's reading motivation. One of the authors' interpretations was that this was due to the content of the activities with ABC books, which was inherently less interesting for children than storybooks reading. In the present study, the parents' reading habit of novels and informative books may have had the same effect as the ABC books in the previous study on the children's reading attitude; children may have experienced their parents' activities with novels and informative books as boring and irrelevant. Although this may be a plausible explanation for these results, it deserves caution as the answers on the items within the factor parents' exposure to literacy may not be reliable. As the items may be considered as highly valued activity, parents may have provided more positive answers that do not reflect reality. These results should therefore deserve further investigation.

When testing the potential gender difference in the relation between HLE domains and reading attitude, differences were found in the reading attitude of boys and girls, which was in line with our expectation. Girls' reading attitude was more positive than boys' reading attitude, which was convergent with results of previous studies (e.g. Morrow, 1983; Kush & Watkins, 1996; McKenna et al., 1995). Moreover, the expectation that boys would therefore have more profit of a rich home literacy environment than girls was also confirmed in the present study.

Looking at the influence of each HLE domain separately on both genders, it is important to acknowledge the effect of the factor number of books at home which had only a significant effect on boys, as opposed to the factor frequency of shared storybook reading which had a significant effect solely on girls. This result may be a consequence of boys' and girls' different characteristics, as described by Daniels, Creese, Hey, Leonard, & Smith (2001). These researchers made a study on the way how girls and boys learn in academic environments. They argued that girls are more likely to cooperate with each other and the teacher whereas boys prefer independence, to work alone, and are often more competitive than girls. This gender characteristic may explain the positive effect of the factor frequency of shared storybook reading on girls' reading attitude and the positive effect of the factor number of books at home on boys' reading attitude; if girls like to cooperate in a learning situation, they may appreciate the time their parents take to sit with them and read stories, whereas boys may prefer to have the opportunity to read alone and to have a broad range of books they can choose from. It could be interesting to investigate this probable interpretation of this result in further studies.

Before concluding this study, it is important to acknowledge some limitations of it. Firstly, the measures of home literacy environment were based on parental reports which may have biased the results, as parents may have responded the HLE questionnaire in a more positive way than in reality to make them and their children look better. The second limitation, addressed earlier, is that only 7% of the variance of reading attitude could be explained by HLE domains. There are many other variables, as for example children's reading abilities, which were not assessed in the present study but who may contribute to children's reading attitude.

CONCLUSION

The knowledge about the parental influence on children's reading attitude was confirmed in this present study. As result of the positive effect of a rich home literacy environment, it is therefore in the child's interest for parents to cultivate a positive reading attitude at a very young age. From the results of this study, it also seems that a combination of an active support (e.g. shared storybook reading) and passive support (e.g. a broad range of available books at home) could be the best approach. With respect to the negative effect of the factor parents' exposure to literacy on reading attitude, further studies with a more reliable scale for this factor are required to examine its effect in a more trustworthy way.

Regarding the difference between gender on reading attitude, although the difference was small, the results that boys profit more from a rich home literacy environment than girls as well as the different effect of HLE domains on both genders were interesting findings and should deserve further investigation. It could be interesting to examine whether the characteristics of the feminine and masculine gender does indeed cause that in a learning situation boys prefer autonomy whereas girls look for cooperation. But for the moment, this gender difference should be acknowledged; it is indeed important to realize that the type of interaction that is given to develop a positive reading attitude may be different for boys and girls.

REFERENCES

- Aarnoutse, C.A.J. (1991). *Woordenschatstest en leesattitudeschaal*. Berkhout Nijmegen BV.
- Baker, L., & Scher, D. (2002). Beginning readers' motivation for reading in relation to parental beliefs and home reading experiences. *Reading Psychology, 23*, 239-269.
- Baker, L., Scher, D., & Mackler, K. (1997). Home and family influences on motivations for reading. *Educational Psychologist, 32*, 69-82.
- Bintz, W.P. (1993). Resistant readers in secondary education: Some insights and implications. *Journal of reading, 36*, 604-615.
- Cohen, J. (1988). *Statistical power analysis for the behavioural sciences* (2nd ed.). Hillside: Erlbaum.
- Cox, K.E., & Guthrie, J.T. (2001). Motivational and cognitive contributions to students' amount of reading. *Contemporary Educational Psychology, 26*(1), 116-131.
- Csikszentmihalyi, M. (1991). *Literacy and intrinsic motivation*. In S.R. Graubard (Ed.), *Literacy: An overview by fourteen experts* (pp.115-140). New York: Hill & Wang.
- Daniels, H., Creese, A., Hey, V., Leonard D. & Smith, M. (2001). Gender and learning; Equity, equality and pedagogy. *Support for Learning, 16*(3), 112-116.
- Guthrie, J.T., Schafer, W.D., Wang, Y.Y., & Afflerbach, P.(1995). Relationships of instructions of reading: An exploration of a social, cognitive, and instructional connections. *Reading Research Quarterly, 30*(1), 8-25.
- Hidi, S. (2000). An interested researcher's perspective: The effects of extrinsic and intrinsic factors on motivation. In C. Sansome and J.M. Harackiewicz (Eds), *Intrinsic and extrinsic motivation: The search for optimal motivation and performance*. NY: Academic Press.
- Holden, J. (2004). *Creative Reading*. London: Demos.
- Kubis, M. (1994). *The relationship between home literacy environments and attitudes toward reading in ninth-graders*. (ERIC Document Reproduction Service No. ED385822).
- Kush, J.C. & Watkins, M.W. (1996). Long-term stability of children's attitude towards reading. *The Journal of Educational Research, 89*, 315-319.
- Leary, M.R. (2008). *Introduction to behavioral research methods*. Boston: Pearson Education.
- Logan, S. & Johnston, R. (2009). Gender differences in reading ability and attitudes: examining where these differences lie. *Journal of Research in Reading, 32*, 199-214.

- Lyon, G.R. (1998). Statement before the Committee on Labor and Human Resources, Senate Dirkson Building, Washington, D.C. Accessed online on 15.06.2009 at <http://www.dys-add.com/ReidLyonJeffords.pdf>
- McKenna, M.C., Kear, D.J., & Ellsworth, R.A. (1995). Children's attitudes towards reading: a national survey. *Reading Research Quarterly*, 30, 934-955.
- Morgan, P.L., & Fuchs, D. (2007). Is there a bidirectional relationship between children's reading skills and reading motivation? *Exceptional Children*, 73, 165-183.
- Morrow, L.M. (1996). *Motivating reading writing in diverse classrooms: social and physical contexts in a literature-based program* (NCTE Research Report No. 28). Urbana, IL: National Council of Teachers of English.
- Morrow, L.M. (1983). Home and school correlates of early interest in literature. *Journal of Educational Research*, 76, 221-230.
- Ryan, R.M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55, 68-78.
- Saracho, O.N. (1997). Using the home environment to support emergent literacy. *Early Child Development and Care*, 127-128, 201-216.
- Schlichting, L. (2005). *Peabody Picture Vocabulary Test-III-NL*. Amsterdam: Harcourt Test Publishers.
- Sénéchal, M. (2006). Testing the Home Literacy Model: Parent involvement in kindergarten is differentially related to grade 4 reading comprehension, fluency, spelling, and reading for pleasure. *Scientific Studies of Reading*, 10(1), 59-87.
- Sénéchal, M., Lefevre, J.A, Hudson, E. , & Lawson E.P (1996). Knowledge of storybooks as a predictor of young children's vocabulary. *Journal of Educational Psychology*, 88(3), 520-536.
- Turner, J.C. (1995). The influence of classroom contexts on young children's motivation for literacy. *Reading Research Quarterly*, 28, 34-51.
- Wang, J.H.Y., & Guthrie, J.T. (2004). Modeling the effects of intrinsic motivation, extrinsic motivation, amount of reading, and past reading achievement on text comprehension between U.S. and Chinese students. *Reading Research Quarterly*, 39, 162-186.
- Whitehurst, G.J., & Lonigan, C.J. (2001). Emergent literacy: Development from prereaders to readers. In S.B. Neuman & D.K. Dickinson (Eds.). *Handbook of early literacy research* (pp.11-29). New York: Guilford.
- Wigfield, A. (1997). Reading motivation: A domains-specific approach to motivation. *Educational Psychologist*, 32, 59-68.

- Wigfield, A., & Guthrie, J.T. (1997). Relations of children's motivation to the amount and breadth of their reading. *Journal of Educational Psychology*, 89, 420-432.
- Yaden, D.B., Rowe, D.W., & McGillivray, L. (2000). Emergent literacy: A matter (polyphony) of perspectives. In M. L. Kamil, P.B. Mosenthal, P.D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (Vol.3), (pp.425-454). Mahwah, NJ: Erlbaum.
- Zhou, H., & Salili, F. (2008). Intrinsic reading motivation of Chinese preschoolers and its relationships with home literacy. *International Journal of Psychology*, 43, 912-9.