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Article Title Page

The Library at School: Effects on reading attitude and reading frequency

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Structured Abstract:

Abstract

Purpose – This paper describes the effects of the Dutch policy program *the Library at School* on primary school pupils' leisure book reading and attitude towards reading books, in the first year of the nationwide implementation of the program.



Design/methodology/approach – In monitoring the effectiveness of the Library at School, online questionnaires were administered to students (grades 2-6), teachers and reading-media consultants. The study is based on data collected in the school year 2011-2012 from a sample of 4,682 students from 229 classes, with 284 teachers of 68 schools.

Findings – Multilevel regression analyses show that effects of the Library at School on reading attitude and leisure reading cannot yet be discerned in 2011-2012, albeit slightly positive univariate effects are found.

Research limitations/implications – As yet, the number of participating schools is limited, hence statistical power is low on that level. Whether the sample can be considered representative for all Dutch primary schools is not certain.

Practical implications – The findings suggest that a school library in itself is not sufficient to promote book reading in leisure time. The role of the reading-media consultant in facilitating both teachers and learners might have to be strengthened.

Originality/value – This study gives a first glimpse at the effects of the program the Library at School on the reading attitude and leisure reading of primary school students in the Netherlands. The continuous monitoring approach employed is new and can be helpful for similar policy programs in other countries.

Keywords: The Netherlands, reading promotion, books, leisure reading, reading attitude, primary education, public libraries

Article Classification: Research paper

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Running Heads:

The Library At School: Effects on reading attitude and reading frequency

1. Reading promotion through the Library At School: program and practice

In 2013, the place that public libraries occupy in Dutch society is no longer as self-evident as it was two decades ago. In the first half of the 1990s, the number of library members and usage figures reached their peak, following a sharp rise in the 1960s and 70s. Then a steady decline set in.[1] Several explanations have been suggested for this decline. A plausible explanation, which is supported by empirical studies, is that printed media, books in particular, are judged differently by older and younger generations. Older generations grew up in a time where few other media were available. Accordingly, books, newspapers and magazines took a central place in their media menu and leisure time use during their youth. Over the years, they largely remained faithful to printed media, although they obviously have embraced television and digital media as well. Younger generations, on the other hand, grew up with a range of alternative media forms and had a totally different balance between printed and other media during their youth. Additionally, many alternative leisure activities have come within reach of larger groups over the twentieth century. In short, today's youngsters grow up with a package of media and leisure activities that is much more diverse compared to the young people of forty or seventy years ago. These 'competitors' squeeze the amount of time, money and attention that the younger part of the population devotes to reading printed texts (Huysmans, 2007; Huysmans and Hillebrink, 2008).

A combination of drastic cuts and a copyright that hinders lending and passing on of digital content force Dutch public libraries to make strategic choices with respect to their services in the years to come (Huysmans and Hillebrink 2008; Kasperkovitz 2011). In a number of municipalities where subsidies for the public library are reduced considerably, it is argued that the scarcer resources can best be employed where the optimal societal return on investment can be achieved - in children and youngsters.[2] Not just because today's youth read less than their parents and grandparents did when they were younger, but especially since a growing body of scientific research indicates that good reading ability pays off later in life: in a higher educational level and in better chances on the labor market, as well as a higher income and eventually more wealth (National Endowment for the Arts [NEA], 2007; OECD, 2007). The other way around, it has appeared that the majority of the children who start their primary school career with a language disadvantage will never be able to catch up, in fact, they generally fall even further behind (Stanovich, 1986; Cunningham and Stanovich, 1997; Mol and Bus, 2011; Mullis *et al.*, 2012). These disadvantages already appear during the preschool period, especially among families with parents who are themselves low-ability readers. Hence, interventions aimed at stimulating reading would be most effective when they succeed in reaching children as early as possible.

One of these interventions is the *Library At School* ('de Bibliotheek op School'), which comprises a structural cooperation between library, municipality and schools directed at promoting reading enjoyment, stimulating reading and language development, and improving information and media skills of primary school pupils in the Netherlands.[3] The library is an obvious partner for schools in this area given its expertise in stimulating pupils' reading motivation, in training teachers in effective working methods and in informing them about the

use of book collections and other sources in subjects such as geography and history. Although the Library At School is a national policy program, it is not a standard formula; how the program is given shape depends on the local situation, wishes and needs (Thomas, 2013). Nevertheless, there are several core components or 'building blocks' that can be pointed out: network and policy, expertise, collection, digital portal, reading and media plan, activities, monitor, logistics, exploitation, and marketing and communication. For example, the library and schools involved register the planned objectives, results and activities for the school in a 'reading and media plan' on a yearly basis. The school provides a reading coordinator who supports the team in implementing this plan, whereas the library provides the school with a reading-media consultant who guides the school in carrying out the Library At School program (Van Dam *et al.*, 2012). The consultant assists pupils in finding books and information (including internet searching) and supports teachers with materials and pedagogical expertise. Another important element of the Library At School is access to a large, varied and up-to-date collection of which – in an optimal situation – at least 50 per cent is available at school, preferably in a school library. Moreover, structural attention is paid to reading and media literacy in every grade and all the pupils are made members of the public library (Van Dam *et al.*, 2012).

The ultimate objective of the improved collaboration between schools and libraries is enhancing the pupils' language development, as this is a source of concern for many Dutch schools. In spite of a range of actions in the educational program and didactic, language disadvantages appear to be persistent and schools are often unable to turn the tide (Van Dam *et al.*, 2012). One of the most effective measures schools can take (in conjunction with the library) seems to be a structural policy regarding free voluntary reading and leisure reading. After all, there is a vast amount of research demonstrating a positive link between reading for pleasure and language and reading ability. Children who often read in their leisure time have on average larger vocabularies and better reading comprehension skills, as well as better spelling and technical reading skills, than children who read less often (Krashen, 2004; Mullis *et al.*, 2007; Broekhof, 2011; Mol and Bus, 2011). It is estimated that children who read approximately 15 minutes a day can thereby enlarge their vocabulary with 1,000 new words per year (Broekhof, 2011). Reading a wide variety of reading materials (i.e. fiction books, magazines, comics etc.) is especially related to reading achievement (Gille *et al.*, 2010).

Given the positive relationship between reading behavior and proficiency in reading and language, the Library At School indeed seems to have the potential to improve these skills among pupils. In line with this, a considerable amount of research conducted outside the Netherlands has indicated that school libraries are related to improved learning outcomes for pupils (Lance *et al.*, 1993; Ryan, 2004; Scholastic, 2008; Clark, 2010). Dutch research on school libraries has also pointed to positive relations, such as a growth in youth memberships and book loans, more leisure reading among children, and a more positive attitude towards books (Geurtsen, 2008; Kieft *et al.*, 2011). However, the amount of research carried out in the Netherlands is considerably limited and the available results are based on rather small and local datasets. The present study contributes to the body of research on the effectiveness of school libraries in the Dutch context. On the basis of a relatively large and national dataset, it provides a first glimpse at the effects of the Library At School program on primary school pupils' leisure reading and reading attitude, factors that are related to language and reading skills.

2. Monitoring the Library At School

Monitoring the effectiveness of the program is an integral part of the Library At School. All municipalities, schools and libraries participating have committed themselves to supporting monitoring of the effects of the program. For the purpose of monitoring effectiveness, an instrument especially designed for the Library At School is used - the *Monitor the Library At School*. This instrument consists of online questionnaires for pupils, teachers and reading-media consultants, containing questions about the pupils' attitude towards reading, leisure reading, book-borrowing behavior of pupils, reading promotion efforts of teachers, and the reading promotion policy of schools (and the library within the school). The questionnaires are administered on a yearly basis. After a pilot phase in 2010, involving just a few schools and libraries, the monitor has now been completed twice by participants throughout the country: in school year 2011-2012 over 5,000 pupils completed it, and in 2012-2013 approximately 30,000 pupils did so. The monitor data are recorded in a national database.

The monitor can be seen a practical instrument which gives insight into the outcomes of the cooperation between schools and libraries. Its main objective is providing these institutions with information that can help them improve the results of their collaboration. The school and library analyze this information together and, based on the results, they make new arrangements about their cooperation. In the following year, the monitor is again administered and the results are analyzed to assess whether the new arrangements have led to the intended changes. In this way, the monitor functions as a practical instrument for taking decisions on an executive and policy level in both schools and libraries.

This evidence-based approach cannot be seen in isolation from questions raised in educational policy. In the Netherlands, schools are being confronted by a national policy that increasingly asks for explicit results, especially when it comes to basic school subjects such as language and math. To achieve better results, schools concentrating on systematically and deliberately optimizing student performance are getting more numerous. 'Optimizing student performance means that a teacher team jointly analyses the pupils' learning outcomes, which leads them to making decisions about the content of their teaching. This happens according to a cyclical method ('plan, do, check, act'), taking place two or three times a year. The Monitor the Library At School intends to fit in with this approach, by shedding light on the outcomes of the collaboration between the school and library based on statistical data as well, and making arrangements about possible changes in procedures following these figures. It can be considered as a type of action research, explicitly aimed at helping improve educational practices with respect to reading among pupils.

For libraries, the monitor is a timely one as well, since they are also confronted with the question whether the outcomes of their services really justify the investments involved (Huysmans and Oomes, 2012). In many places, library branches are now being closed in order to save money due to the municipalities' budgetary situation (Kasperkovitz, 2012). The monitor can help libraries show that their services do have an actual effect, with a societal interest: improving the language development of children and, as a result, their chances as participants in the job market, as citizens and as individuals.

3. Method

Construction of the questionnaires

In designing the monitor questionnaires, priority was given to practicability, by aiming at gathering as much as information as possible with a limited number of items. Nonetheless, the utility for scientific purposes was considered as well. Ideally, the monitor supports both objectives, but administering well-validated scientific instruments would impose too heavy a burden upon the pupils (especially upon the ones who had just learned to read) and probably also upon the teachers. Hence, maximizing practicability (i.e. limiting the size of the questionnaires) was deliberately preferred over scientific utility. Nevertheless, based on the data collected with the questionnaires, it is still possible to gain insight into the effectiveness of the implementation of the Library At School on a nationwide level, albeit on the basis of instruments that face some limitations from a methodological point of view.

The questionnaire designed for the *pupils* consists of approximately 15 questions addressing reading pleasure, leisure reading, reading preferences, reading culture at home, library visits and possession of books. This survey has to be filled out by primary school pupils in second to sixth grade (i.e. groups 4 through 8 in the Dutch primary school system). In second grade, the children's reading level is just sufficient to answer the questions on their own, although they sometimes receive some support from older pupils or adults. The constructed questionnaire for *teachers* is very concise to maximize the response rate. It contains questions that focus on their reading promotion activities such as reading to the pupils, participating in reading projects, going to the library in or outside the school, having pupils deliver book presentations, and deliberating reading promotional activities with other teachers. The questionnaire for the *reading-media consultants* is fairly extensive, with about 25 questions addressing topics such as the involved library at the school(s), the public library, and the reading promotion policy in the school.

Sample and procedure

Participating in the monitor happens 'bottom-up', with municipalities, primary schools and libraries deciding to join forces on a local level. In fact, the monitor uses the infrastructure of libraries and schools to reach a great amount of participants, with libraries inviting schools to participate in the monitor. For this purpose, libraries can use all sorts of information materials (e.g. brochures, manuals and PowerPoint presentations) provided by the national reading promotion program *Kunst van Lezen*.^[4] If a school agrees to participate, the local library branch will send online invitations to the teachers with a link that grants them access to the digital teacher questionnaire as well as a link that grants their pupils access to the online questionnaire for pupils. The reading-media consultant also completes his or her online questionnaire. Access is granted to the monitor over about a four-month-period (October – January). Thereafter, the survey data are cleaned and the schools receive a report from the local library branch in which their results are compared to the average situation of all schools in the national database.

In short, the sample is not formed based on a predetermined sampling frame, attempting to achieve a maximum diversity in regions, degree of urbanization, and school denomination (i.e. public schools or privately run (independent) schools). Consequently, it is uncertain whether the sample can be considered representative for the situation at all Dutch primary schools. Yet, a global assessment shows that both more and less urbanized areas are represented in the sample. The same holds for the various denominations (public, Roman Catholic, Protestant, Montessori, and other types of schools based on religious principles and/or pedagogical principles).

This article is based on the data collected in the school year 2011-2012. In this year, the initial sample consisted of 70 schools of which 253 classes (grades 2-6) participated in the monitor. The number of schools involved was actually somewhat larger (77), but in 7 schools neither teachers nor pupils participated in the monitor. In total, 590 teachers of the remaining 70 schools participated in the study by filling out their own questionnaire and /or by granting their pupils access to the pupil survey. The difference between the number of classes and teachers can be explained by the fact that teachers of the lower grades (i.e. kindergarten and first grade) completed a questionnaire as well, but it is also due to the quite common situation in which pupils in a particular class were taught by two (or even more) teachers. A total of 5,871 pupils filled out a questionnaire in 2011-2012.

The final sample – on which our analyses are based – is somewhat smaller in size than the initial sample. First of all, only teachers of grades 2 through 6 were included in the final sample, as these are the grades the present study focuses on. Moreover, the data of a considerable number of pupils (698) in second to sixth grade could not be analysed because of missing data on the part of their teachers (i.e. they granted their pupils access to the online questionnaires, but did not complete their own survey, which resulted in a lack of information about the reading promotion activities in their class). The observations of another 491 pupils were left out since they were, according to the dataset, in unrealistically large classes (i.e. more than 40 pupils per class, with a maximum of over 100 pupils). Obviously, the registration of pupils per class went wrong in these cases. Accordingly, the final sample consists of 4,682 pupils (79.7 per cent of the initial sample) from 229 classes, with 284 teachers of 68 schools. The school size varied from 36 to 559 pupils, with an average of 223 pupils.

Data analysis

The dataset has a nested structure. Pupils (level 1) are nested in classes with the same teacher(s) (level 2) and, per class, they are exposed to the same reading promotion influences. Classes and teachers, in their turn, are part of schools (level 3) with a certain reading promotion policy that is the same for everyone involved in the school. Given the hierarchical structure of the data, the observations cannot be considered independent. Therefore, a multilevel modeling approach was required to analyze the data set. Unlike more conventional statistical techniques, multilevel analysis does not demand independence of observations and it gives more correct estimates of standard errors than models that neglect the nested data structure (Tabachnick and Fidell, 2007; Hox, 2010).

4. Results

As already mentioned, the results presented in this section are based on data of the school year 2011-2012, a year in which the Library At School and the related monitor became integrated on a larger scale in the Dutch educational field. At a number of schools involved in this study, the Library At School program had just been implemented when the data collection took place, and pupils and teachers were still in the phase of getting used to it. Accordingly, it is very early to expect that possible effects of the Library At School have already occurred. Nevertheless, it is quite obvious to explore whether some early effects may already be observed, as the data are in fact available.

The analysed data set is structured along three levels. On the top level, the primary schools are situated with different combinations of facilities for reading education. A school library is one of these, but there are others as well. The data for the schools were collected

through questionnaires administered to the reading-media consultants employed by the public libraries. On the middle level, there are the classes within the schools. As mentioned before, the teachers have provided the information about how they shape reading promotion in their respective classes. These facilities on school and class level together determine which reading impulses the pupils, situated at the bottom level of the three-level-structure, receive in school. In Tables I and II, we first map the facilities. Next (Tables III-VI) we show to what extent these affect the reading attitude and the amount of reading in leisure time of the pupils.

Provisions in the schools

Not every school in the study houses a school library, with just 32 out of the 77 schools (42 per cent) in the initial sample of schools having one. In the remaining 45 schools there are other provisions. One of these is the *Boek1boek* service: pupils can make reservations for books in their own school that are then delivered there after a short interval. Less tailored to individual pupils are traveling collections, which – centred round a school's project theme – are delivered to the school by the public library and exchanged for another collection for a specified period. Many schools also have an agreement with the local library branch to go there with the class and receive instructions about how library collections are ordered, as well as to return books and borrow new ones. The facilities are also provided in combination (Table I).

>> INSERT TABLE I ABOUT HERE

Table I shows the co-occurrence of a school library and the other three facilities. One of them is significant and obvious: if a school library is present, classes from this school visit the local public library branch less often.[5] The primary objective of the Library At School evidently is to bring books closer to the children and thereby making them more accessible than is the case when they have to leave school to obtain them. Yet the combination of the presence of a school library, the *Boek1boek* service and (especially) the exchange collections does occur. This is not internally inconsistent: as the school library has a fixed collection, the other services provide an additional temporary collection.[6]

To what extent does reading promotion in schools with and without the Library At School program differ? The objective of the program naturally is to give a positive impulse to reading promotion at schools. This ought to find expression in increased attention for reading promotion by the teachers in their classes (Table II).

>> INSERT TABLE II ABOUT HERE

Four out of nine activities the teachers have been asked about do indeed occur (significantly, $p < .05$) more often in schools with a school library: going to the library in the school itself, obviously, but also having pupils deliver book presentations, participating in projects around books and reading, and organizing book circles. One activity occurs less often: visiting the local library branch with the classes (see also Table I). Almost all teachers in both categories of schools read aloud to the class at least several times a month. Nor does introducing a book to the class occur more often in schools with a school library: in two out of three classes this is done several times a month or more often. In both school types, teachers deliberate almost equally frequently about reading promotion activities. In almost half of the classes, the teacher pays attention to books in a different way at least several times per month. Activities named are,

among others, offering extra activities for children who lag behind in reading skills, having children read aloud to each other, letting children retell and re-enact the story, participating in reading promotion activities such as the Children's Book Week, reading (aloud) with parents, and integrating reading education with other teaching modules (e.g. search for historical or geographical information in books).

All in all, reading promotion appears to be somewhat more prominent in schools having a school library than in the other schools. It is the question, however, whether one can expect that this as yet slight lead can be expected to have yielded already significant effects on pupils' reading behaviour – as already mentioned, the putting into practice of the Library At School program had only begun shortly before this first evaluation study. In the remaining part of this section we will investigate this for two aspects of reading: first the reading attitude (how much do children like reading) and then the frequency of reading in leisure time.

Effects on reading attitude

The affective dimension of reading was measured in this study by asking pupils the straightforward question 'How do you like reading books?'. Response categories were: 1 annoying; 2 don't like it so much; 3 quite like it; 4 like it very much. On average the pupils are situated at the upper side of the scale with a mean score of 3.22. Reading is thus experienced as being 'likeable'. The variation around the mean appears limited when the reading attitude is crossed with the frequency with which teachers perform reading promotion activities in the classes (Table III).

>> INSERT TABLE III ABOUT HERE

Out of the eight forms of reading promotion listed here, four cause slight differences in reading attitude.[7] Visiting the school library shows the least limited effect. The more often the class visits this facility, the more pupils like reading books. Next in line is reading aloud to the class with also a slightly positive effect. On the other hand, deliberation between teachers about reading promotion appears to have a slightly negative effect: the more often it occurs, the less pupils like reading books. To conclude, participating in reading promotion campaigns shows a curvilinear effect. Both pupils in classes in which this never happens and pupils in classes where this happens most often, score higher on reading attitude than the categories in between. Visiting the library outside school with the class, as an alternative to having a library within school, does not have an effect on reading attitude.

The effects reported in Table III are those of separate variables. They were not controlled for the influence of other characteristics. In a multivariate regression analysis, it is possible to track down the 'pure' effects of the characteristics. Due to the layers in the data with pupils nested in classes nested in schools, a multilevel regression is needed. In this type of analysis, the variance in reading attitude is divided over the three levels of schools, classes (i.e. teachers) and the residual variance on the pupil level (including variance due to random measurement error). In Table IV, the results of four analyses are displayed. First, a zero-base model without predictors is estimated. The model splits up the variance in the dependent variable (reading attitude) to the three levels, which gives a first estimate of the maximum amount of variance between classes and schools that can be explained by variables on their respective levels, i.e. characteristics measured at the school and teacher levels.

Model 1 then shows effects of the Library At School: the presence of a library in the school (school-level variable) and how often it is visited with the class (class/teacher-level variable). In Model 2, three variables are added that map the reading promotional activities by the children's parents: reading aloud to the child, talking with the child about books, and visiting the library (generally this will be the local public library branch) with the child. These questions have been administered to the children themselves. In Model 3, gender and age of the children are controlled for. It is known from earlier research that girls have a more positive (book) reading attitude than boys. It is also known that in the higher grades the reading attitude tends to decline somewhat (Nardon *et al.*, 2011; Huysmans, to be published).

>> INSERT TABLE IV ABOUT HERE

Model 0, the variance-decomposition model, demonstrates that out of the total variance in reading attitude, a maximum amount of 3.2 per cent can be attributed to differences between schools. Differences between teachers in the way they practice reading promotion in their classes account for maximally 5.2 per cent of total variance in reading attitude. Thus, the boundaries of what the Library At School program might bring about are set, at least for this first evaluation moment in 2011-2012.

The bare presence of a library in a school does not yield a significant contribution to the explanation of variance in reading attitude as yet. The same is true for visiting the school library with the class by the teacher (Model 1). Since by far the largest amount of variance can be attributed to differences between pupils (and not schools and classes/teachers), chances are that reading promotional activities by parents have greater effect. Model 2 demonstrates that indeed this is the case, with two out of three activities contributing to explaining differences in reading attitudes. Talking about books, and visiting the local library branch with the child lead to a slightly more positive reading attitude. Reading aloud to the child does not appear to have effect on reading attitude – at least not in the age group 8-12, which is object of study here. Other research has provided evidence that reading aloud to children can be advantageous to preschool children, enhancing their vocabulary (Mol and Bus, 2011).

The effects of parental reading socialization remain when gender and age of the child are added in Model 3. Both effects are statistically significant. Controlled for other factors in the model, girls score .25 higher on the reading attitude variable than boys. As age climbs, the reading attitude declines with .05 per age year on the scale. Over the five grades monitored (corresponding roughly with ages 8-12) this means a decline of .25 of the scale. The effects of gender and age are therefore more substantial than all reading promotional effects combined.

Effects on reading books in leisure time

In a similar way as with reading attitude, the effectiveness of the Library At School and other aspects of reading promotion can be mapped. As before, we first present the univariate effects (Table V) and subsequently the multivariate analysis (Table VI).

>> INSERT TABLE V ABOUT HERE

Visiting the school library with the class has a – univariate – effect on book reading frequency in leisure time, although the size of the effect is limited here as well. The two other significant effects are negative: having children deliver book presentations, and deliberating reading

promotional activities with other teachers cause reading frequency to decline somewhat. For book presentations, this can be interpreted as a possible effect of 'schoolifying' reading. To the extent that pleasure in reading books is subordinated to learning in school, this appears to negatively affect reading in leisure time years later in adulthood (see Verboord, 2003).

>> INSERT TABLE VI ABOUT HERE

The multivariate analysis in Table VI shows that in this starting phase of implementation of the Library At School program, effects on the leisurely book reading frequency cannot yet be discerned. The zero-base model demonstrates again that of the total variance in reading frequency only minor, albeit statistically significant, parts can be attributed to between-school (3.6 per cent) and between-class/teacher differences (4.0 per cent). Neither the presence of a school library (school level) nor visiting it with the class (teacher level) contribute to the explanation of differences in how often pupils read books at home in either of the models 1-3. The importance of the parental role is highlighted yet again by the positive effects of talking about books and visiting the library with the child. Also, reading aloud to the child does not seem to have an effect on leisure reading, at least not in the age group studied here.

The strongest effect does again stem from the child's gender: girls read books at home more frequently than boys, with a difference of almost half a point on the scale. The negative age effect is again apparent, with the oldest pupils (around 12 years) scoring almost a quarter point lower than the youngest (about 8 years) on the reading frequency scale.

5. Conclusions, recommendations and discussion

The results of this study into the effects of a Library At School policy program in large part mirror the findings of earlier studies (like the one by Kraaykamp, 2002). The capacity of schools, teachers and libraries in promoting reading in children should not be overestimated. Parents can exert a stronger influence in enhancing reading attitude and frequency, particularly in preschool years (Whitehurst and Lonigan, 2002) than schools and libraries can. In the findings reported here, this was demonstrated by the limited amount of variance in reading attitude and frequency that could be maximally explained by between-school and between-teacher differences. Put in other words, differences in reading between pupils could not be attributed to what schools, teachers and libraries do.

Nevertheless, the slightly positive univariate effects that could be discerned in the first program year already give hope for the years to come. That no significant effects could be demonstrated in the multivariate analyses certainly is connected to the as yet small number of participating schools in school year 2011-2012 and the low statistical power that came with it. In the following year 2012-2013, already over 300 schools were participating, which gives hope for the future of the program as well.

Seen from the other, more critical side this early effect evaluation has demonstrated that the Library At School program should try to reinforce its outcomes for reading education. The differences between schools with and without a school library are as yet limited. The employment by libraries of reading-media consultants in the schools, who support and facilitate both teachers and pupils, should not become the last item of the budget. The potential success of the program, as indicated by the reinforcement of children's inclination to read, will depend to a considerable extent on their efforts. Only when the Library At School is integrated with the entire course curriculum will the investment in bringing the library facilities into the school pay

off: for the public library itself, for the schools and the teachers, but first and foremost for the pupils in their later lives.

Notes

- [1] See <http://www.debibliotheekopschool.nl> (accessed 20 February 2013).
- [2] See e.g. Kasperkovitz (2011); <http://www.bibliotheekemmen.nl/juni-2011/actueel.html>;
<http://www.bibliotheek.rotterdam.nl/pagina/18208.Bibliotheek-Rotterdam-kijkt-vooruit.html>;
<http://www.bibliotheekgouda.nl/index.php?cmd=file&action=download&file=1066> (accessed 9 May 2013).
- [3] [Http://www.debibliotheekopschool.nl](http://www.debibliotheekopschool.nl) (accessed 20 February 2013).
- [4] See www.kunstvanlezen.nl.
- [5] Due to the limited number of schools (N=68) in this analysis the confidence intervals are large and substantial correlations can nevertheless appear not significant.
- [6] For how the Library At School and the Boek1boek service are connected see <http://overboek1boek.nu/bieb-op-school> (Dutch only).
- [7] The significance testing is not entirely pure in the sense that we did not take into account the clustered structure of the observations. The p-values in Tables III and V therefore give a slightly too rosy picture of the effects.

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TABLES

Table I.

Co-occurrence of reading facilities and activities in primary schools (vertical percentages; N = 77 schools)

	School library		phi	p
	No	Yes		
Boek1boek			0.118	0.302
No	84	75		
Yes	16	25		
Exchange collections			0.009	0.940
No	21	21		
Yes	79	79		
Visit public library branch			-0.371	0.002
No	55	90		
Yes	45	10		

Source: Monitor Library at School in the Netherlands 2011-2012.

Table II.

Co-occurrence of reading promotion activities by teachers and presence of a school library (% performing the activity several times a month or more often; N=284 teachers, 68 schools)

	School library		Correlation	
	No	Yes	phi	p
Reading aloud to class	95	94	0.080	0.439
With class to school library	23	62	0.444	0.000
With class to public library branch	49	36	0.143	0.008
Introducing books in the class	63	69	0.113	0.111
Pupils giving presentation of a book	25	44	0.212	0.000
Participating in project around books/reading	7	9	0.129	0.046
Consult with team about reading promotion	15	12	0.095	0.269
Organize a book circle	11	24	0.214	0.000
Other activities with books	46	46	0.060	0.820

Source: Monitor Library at School in the Netherlands 2011-2012.

Table III.

Univariate effects of reading promotion activities by teachers in class on reading attitude pupils (N = 4,628-4,650 pupils, 284 teachers, 68 schools)

	never	several times a year	several times a month	once a week	several times a week	over- all mean	eta	p (F-test)
Reading aloud to class	3.19	3.13	3.23	3.29	3.27	3.21	0.068	0.000
With class to school library	3.21	3.22	3.26	3.33	-	3.22	0.032	0.192
With class to public library branch	2.98	3.11	3.23	3.20	3.23	3.21	0.054	0.009
Introducing books in the class	3.20	3.19	3.24	3.24	3.16	3.21	0.036	0.186
Pupils giving presentation of a book	3.25	3.21	3.25	3.17	3.20	3.22	0.045	0.054
Participating in project around books/reading	3.30	3.21	3.23	3.02	3.30	3.22	0.049	0.025
Consult with team about reading promotion	3.28	3.22	3.12	-	3.33	3.21	0.060	0.001
Organize a book circle	3.21	3.19	3.22	3.32	3.33	3.22	0.046	0.044

Scale reading attitude ('How do you like reading books?'): 1 = low, 4 = high.

In the F-tests no correction has been made for dependencies between observations.

Source: Monitor Library at School in the Netherlands 2011-2012.

Table IV.

Multilevel regression of reading attitude on reading socialization and personal characteristics (N = 4,682 pupils, 284 teachers, 68 schools)

	Model 0		Model 1		Model 2		Model 3	
	B	SE	B	SE	B	SE	B	SE
Intercept	3.200	0.023	3.143	0.037	2.765	0.043	3.163	0.102
Schools								
School library present			0.069	0.049	0.051	0.045	0.037	0.045
Teachers								
Visit school library with class			0.013	0.013	0.014	0.013	0.019	0.012
Parents								
Reading aloud					0.010	0.010	0.001	0.010
Talk with child about books					0.083	0.011	0.082	0.010
Visit library branch with child					0.082	0.008	0.070	0.008
Pupils								
Gender: female							0.240	0.020
Age							-0.048	0.009
Variances								
School	0.017	0.006	0.015	0.006	0.012	0.005	0.013	0.005
Teacher	0.028	0.006	0.029	0.006	0.024	0.005	0.021	0.005
Pupil	0.491	0.011	0.491	0.011	0.462	0.010	0.446	0.010
	% variance		% variance reduction (~model 0)					
School	3.2		14.3		31.9		24.2	
Teacher	5.2		(-3.2)		15.9		24.6	
Residual variance	91.5		(-0.1)		5.8		9.1	
-2 log likelihood	10120		10087		9565		9411	

Source: Monitor Library at School in the Netherlands 2011-2012.

Table V.

Univariate effects of reading promotion activities by teachers in class on frequency of reading in leisure time by pupils (N = 4,616-4,638 pupils, 284 teachers, 68 schools)

	never	several times a year	several times a month	once a week	several times a week	over- all mean	eta	p (F-test)
Reading aloud to class	3.81	3.67	3.79	3.89	3.79	3.81	0.047	0.035
With class to school library	3.81	3.79	3.83	3.89	-	3.81	0.015	0.780
With class to public library branch	3.54	3.67	3.84	3.86	3.80	3.81	0.044	0.062
Introducing books in the class	3.71	3.81	3.82	3.76	3.82	3.81	0.026	0.546
Pupils giving presentation of a book	3.89	3.79	3.79	3.74	3.82	3.81	0.045	0.049
Participating in project around books/reading	3.85	3.80	3.76	3.80	4.05	3.81	0.025	0.570
Consult with team about reading promotion	3.89	3.81	3.68	-	3.78	3.81	0.047	0.016
Organize a book circle	3.81	3.79	3.72	3.90	3.81	3.81	0.027	0.483

Scale frequency of reading in leisure time ('How often do you read a book for pleasure at home?'): 1 = low, 5 = high.
In the F-tests no correction has been made for dependencies between observations.

Source: Monitor Library at School in the Netherlands 2011-2012.

Table VI.

Multilevel regression of frequency of reading in leisure time on reading socialization and personal characteristics (N = 4,682 pupils, 284 teachers, 68 schools)

	Model 0		Model 1		Model 2		Model 3	
	B	SE	B	SE	B	SE	B	SE
Intercept	3.782	0.037	3.759	0.059	3.010	0.068	3.396	0.159
Schools								
School library present			0.115	0.080	0.093	0.070	0.071	0.067
Teachers								
Visit school library with class			-0.011	0.021	-0.013	0.019	-0.005	0.019
Parents								
Reading aloud					0.025	0.016	0.013	0.016
Talk with child about books					0.165	0.017	0.163	0.017
Visit library branch with child					0.156	0.013	0.138	0.017
Pupils								
Gender: female							0.427	0.033
Age							-0.053	0.014
Variances								
School	0.050	0.016	0.048	0.016	0.033	0.012	0.026	0.011
Teacher	0.056	0.013	0.057	0.014	0.042	0.012	0.042	0.012
Pupil	1.291	0.028	1.293	0.028	1.210	0.026	1.163	0.025
	% variance		% variance reduction (~model 0)					
School	3.6		4.1		34.7		47.2	
Teacher	4.0		(-2.3)		24.8		24.4	
Residual variance	92.4		(-0.2)		6.3		9.9	
-2 log likelihood	14555		14501		13854		13684	

Source: Monitor Library at School in the Netherlands 2011-2012.