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Reading promotion of fiction and nonfiction texts

Determinants of elementary school teachers' reading promotion behavior and their students' leisure time reading

Marlon Ruwette



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Reading promotion of fiction and nonfiction texts

Determinants of elementary school teachers' reading promotion
 behavior and their students' leisure time reading

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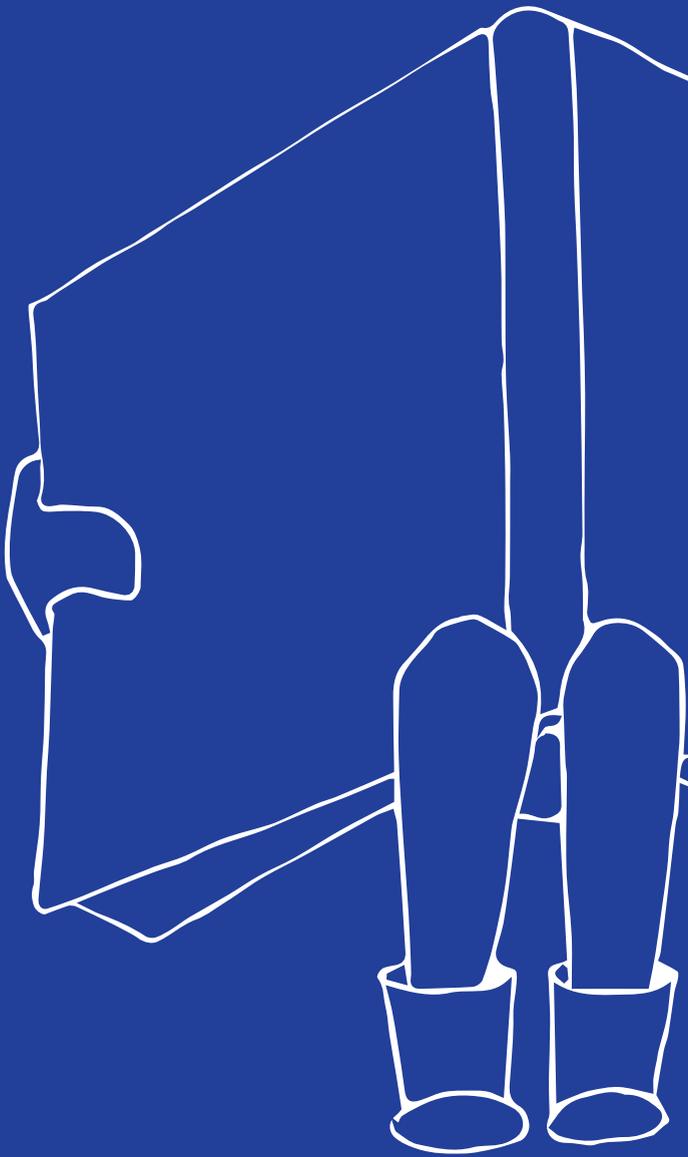
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Table of contents

8	Chapter 1
	<i>General introduction</i>
16	Chapter 2
	<i>Teachers' reading promotion activities. Variation, structure and correlates</i>
18	Abstract
19	Introduction
23	Method
28	Results
38	Conclusion and discussion
42	Appendix A
44	Chapter 3
	<i>Determinants of teachers' reading promotion behavior for fiction</i>
46	Abstract
47	Introduction
51	Method
57	Results
62	Conclusion and discussion
65	Appendix A
66	Chapter 4
	<i>Teachers' attitudes toward fiction and nonfiction reading promotion</i>
68	Abstract
69	Introduction
73	Method
76	Results
83	Conclusion and discussion
88	Chapter 5
	<i>Students' attitude to reading fiction and nonfiction texts</i>
90	Abstract
91	Introduction
94	Method
97	Results

104	Conclusion and discussion
108	Appendix A
109	Appendix B
112	Chapter 6
	<i>General discussion</i>
114	Introduction
122	Main Findings
126	Overall conclusions
128	Discussion
134	References
144	Nederlandse samenvatting
144	Inleiding
145	Doel van de dissertatie
146	Onderzoeksvragen
147	Steekproeven
148	Instrumenten en analyses
149	Resultaten
151	Discussie
153	Referenties Nederlandse samenvatting
155	Dankwoord
158	Short Biography
159	List of publications of the author
160	Groningen Dissertations in Linguistics (GRODIL)

Chapter 1



General
introduction

Reading attitude and leisure time reading

Children's leisure time reading is important for their cognitive and educational development (Mason, 2004; McGeown et al., 2015; Mol & Bus, 2011) and leads to larger vocabularies, and better reading comprehension, spelling and technical reading skills (Lindsay, 2010; Mol & Bus, 2011; Mullis et al., 2017). The increased development of these cognitive skills through leisure time reading is not only important for academic achievement but also for social mobility (Sullivan & Brown, 2015). Leisure time reading behavior is thought to be influenced by the attitude towards leisure time reading (Van Schooten, 2005). In a meta-analysis of 32 studies, Petscher (2010) found a positive relationship between reading attitude and reading achievement for elementary school students. It is a common belief that stimulating students' reading attitude and leisure time reading is also the task of the teacher (e.g. De Naeghel et al., 2014a).

Decline in Attitude

Mol and Bus (2011), found that positive experiences while reading are vital for encouraging children to read and to continue reading later in life. Available evidence on trends over time shows that new generations of children not only spend less time reading for pleasure, but also have a declining attitude toward reading for pleasure, especially in recent years (Gubbels et al., 2017; Clark & Rumbold, 2006). In addition, among students in primary schools, the attitude to reading appears to deteriorate between 1st and 6th grade (McKenna et al., 1995; Petscher, 2010). Besides these negative trends within students and between student generations, students in the Netherlands show a relatively negative attitude towards leisure time reading compared to students in other countries (Gubbels et al., 2017). Given its importance for academic achievement, classroom efforts to improve students' reading attitude and behavior may therefore have important implications for students' educational careers and for society at large.

Reading promotion as a possible solution

Awareness of the need to actively promote reading in the Netherlands arose in the mid-1980s. Booksellers and librarians noticed a declining interest in reading books, especially literary books, among young people, and raised this concern with the government. For example, in the Cultural Policy Memorandum (1985), Minister Brinkman argued for a policy that aims to make literature more accessible by promoting readers' readiness in general, and at the same time promoting targeted knowledge of literature. In October 2020, the Ministers of Culture and

Education, Slob and Van Engelshoven, published their letter '*Stand van zaken Leesoffensief*' (*State of affairs concerning the reading offensive*), informing parliament about the newly taken steps to promote reading in the Netherlands. Nowadays, reading promotion appears as important as it was 35 years ago. In the aforementioned letter, the Dutch government even states the perhaps unrealistic goal, i.e. no more students lagging behind in reading ability from 2025 onwards.

If we want students to read more for leisure, teachers could be the ones to help reach this goal, especially for students coming from families with lower educated caretakers or caretakers that do not read much themselves. However, many teacher training colleges in the Netherlands fail to spend much time showing student teachers how to promote the reading activities of their future students (Kieft & Damstra, 2020). In a survey among teacher trainers in the Netherlands (Kieft & Damstra, 2020), only one out of three teacher trainers think their graduates are sufficiently competent in promoting the reading activities of their future students.

Aim of the study

Given the fact that the Dutch government has been prioritizing reading promotion for 35 years now, the lack of research into elementary school teachers' attitudes towards reading promotion and their promotion behavior is remarkable. Nowadays, studies into reading promotion behavior of teachers are still scarce, although progress has been made in the last decade (e.g. De Naeghel, 2014a; De Naeghel, 2014b; Kozak & Martin Chang, 2019; Vansteelandt et al., 2022; Vansteelandt, 2020). International research makes clear that the reading attitude and leisure time reading of students in the Netherlands are below par (Clark & Rumbold, 2006; Gubbels et al., 2017; Gubbels et al., 2019; Meelissen et al., 2012).

Research into effects of leisure time reading shows that it has significant effect on students' educational progress. Therefore, in the study reported here, we investigated what reading promotion activities teachers perform in class and what influences their reading promotion behavior. Also, we attempt to answer the question of what influences student leisure time reading behavior and what therefore needs to be changed in order to improve the leisure time reading behavior of students. Without this knowledge, any intervention might prove to be pointless, or worse, counterproductive.

Thus, the aim of this dissertation is to gain insight into the reading promotion activities of teachers in 5th and 6th grade elementary education in the Netherlands, for both fiction and nonfiction texts, and into the teacher or class characteristics

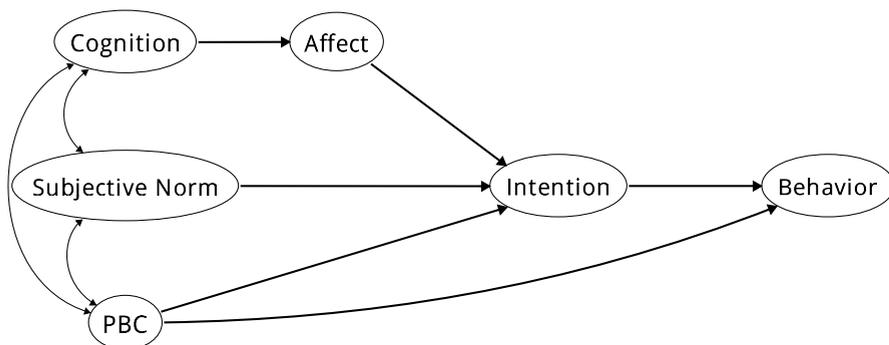
connected to this reading promotion behavior. Furthermore, this thesis is concerned with the leisure time fiction and nonfiction reading habits of 5th and 5th grade students in the Netherlands, and associated determinants. The studies reported in this dissertation attempt to overcome the lack of knowledge concerning teachers' attitude towards reading promotion and their reading promotion behavior, and students' leisure time reading attitude and behavior.

Attitude theory

The attitudes and behaviors of both teachers and students are studied from the perspective of contemporary attitude theory. According to this theory, several constructs influence non-habitual, intentional behavior. The Model of Planned Behavior (MPB) is a theoretical model of interrelated constructs that are thought to determine whether someone chooses to perform a specific behavior or not. In the MPB, Behavior is thought to be influenced by intention to perform the behavior (Intentions) in the near future and the degree to which someone thinks he or she is able to perform the behavior, given the necessary conditions that need to be met to do so (Perceived Behavioral Control). The Behavioral Intentions are thought to be influenced by three constructs: the attitude or feelings towards performing the behavior (Affect), the norms of the individual concerning the behavior (Subjective Norm) and the Perceived Behavioral Control. Lastly, Affect is thought to be influenced by the positive or negative evaluations of outcomes of the behavior one foresees (Cognition), see Figure 1.

Figure 1

The Model of Planned Behavior and its postulated causal structure



Although the MPB is now the most widely used and validated model for attitude research, there is discussion about the hypothesized causal paths between the different constructs in the model. Studies show that for some behavioral domains, a model in which Affect and Cognition each have a direct causal effect on Intention fits better than the model proposed by Ajzen and Fishbein (e.g., Bagozzi & Burnkrant, 1979, 1985; Brinberg, 1981; Fen & Sabaruddin, 2008; Triandis, 1977; Valois et al., 1988). Since Triandis (1977) was the first to suggest this, we refer to this model as the Triandis version. Therefore, in this dissertation the question of which causal paths show the best fit to the data, is also addressed.

Data

Three different sets of data were collected. One set, meant to be representative for all elementary schools in the Netherlands, was based on the response to a questionnaire of a randomly drawn sample of 100 schools from all elementary schools in the Netherlands, which resulted in data of 85 5th and 6th grade teachers of 69 schools in the Netherlands. For the second set, these questionnaire data from 85 teachers were extended with data from a convenience sample of 109 teachers, in order to increase power and allow an answer to theoretical questions about relations between constructs. All 194 teachers filled out a survey with questions on their reading promotion behavior, personal characteristics and on their stance concerning the constructs of the MPB.

The third set of data consists of responses from 994 5th and 6th grade students from 29 elementary schools. The students filled out a logfile about their leisure time reading behavior over the course of one week, and a survey to measure the different constructs of the MPB and demographic information.

Outline of the Dissertation

Results of this study are reported in four chapters. If we want students to read more in their leisure time, it makes sense that teachers and school make efforts to help students. A lot of research has been done on students, but what makes an elementary school teacher more or less involved in promoting reading? To investigate this, we looked at which factors determine behavior. In order to measure this behavior, we first needed to know what exactly that behavior consists of and what different activities aimed at promoting reading occur in the classroom. In Chapter 2 we report on our investigation into the teachers' reading promotion behavior. Based on the reading promotion activities that teachers reported, we identified different categories of teacher behavior.

Next, using a theoretical model to predict behavior, we examined what determines the performance of these different categories of teachers' reading promotion behavior. These results are reported in Chapter 3. Because reading promotion is traditionally seen as promoting the reading of fiction, in Chapter 3 we start by using the MPB pertaining to fiction texts only.

However, there is also an increasing call to not limit the promotion of reading to fiction, but to also pay attention to nonfiction. Therefore, the next study tested whether or not separate MPB constructs should be distinguished for the promotion of fiction and nonfiction. In other words, we answer the question whether or not promoting the reading of fiction and nonfiction are two different issues in the minds of teachers (Chapter 4). After answering this question, we examined what predicts the reading promotion behavior with regard to fiction and nonfiction.

As a final study, we examined whether the MPB constructs pertaining to the reading of fiction and of nonfiction reflect different constructs in the minds of students, or whether one set of MPB constructs suffices for predicting the reading of these two forms of reading material. Naturally, we also looked at how strongly the MPB constructs predict the reading behavior of students, both for fiction and nonfiction (Chapter 5).

Chapter 6 contains a discussion of the methodology, the results and the implications of the four aforementioned studies.

The reader will notice overlap in the literature reviews and methods sections of Chapters 2 to 5, as all Chapters are written as independent journal papers. This drawback is compensated by the advantage that each Chapter can be read on its own.

Teachers' reading promotion activities: Variation, structure and correlates

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Minor revisions were made, e.g. for adapting to APA 7.



Teachers

Abstract

The purpose of this study is to identify the different forms of activities teachers in The Netherlands perform to promote reading in 5th and 6th grade and whether different forms of reading promotion activities are performed independently or cluster into meaningful categories of reading promotion behavior. A survey was distributed to 194 teachers and data was analyzed using Principal Component Analyses (PCA). Based on the results of the PCA, thirteen different types of reading promotion behavior were identified. Specific teacher and class characteristics relate to the different types of reading promotion activities teachers perform. Teachers appear to focus mainly on promoting the reading of fictional texts. Free reading happens most often, and teachers frequently use comics and short stories in class. Most daily activities involve little or no preparation. Correlations are small but do suggest that when there are more girls than boys in class, teachers carry out a wider variety of reading promotion activities. Also, classes with more girls perform more activities related to new media and nonfiction.

Introduction

In the modern world, literacy is a core requirement for gaining knowledge and developing educational potential. The skills needed to understand and use information from written texts, are also necessary for developing higher-order skills, and are linked to positive outcomes at work, social participation, and lifelong learning (PIAAC, 2009). Since learning depends strongly on written materials, reading competence is an important precondition for academic achievement (Mason, 2004; McGeown et al., 2015; Spörer et al., 2009).

However, in many countries, low reading literacy level of students is a matter of concern. Findings of the Program for International Student Assessment (PISA) reveal that in 2015, all participating countries were faced with sizeable proportions of students aged 15 functioning below the baseline reading proficiency level (OECD, 2016). This proportion has remained stable since 2009. In the Netherlands, at the end of elementary education, approximately a quarter of the students aged 12 lack sufficient technical reading literacy, which negatively affects their reading comprehension skills (Gubbels et al., 2017).

To improve the reading literacy of students, schools devote substantial time to decoding skills and reading comprehension, from pre-school programs and kindergarten to secondary and tertiary education. As an aid to reading comprehension education, the development of reading skills has been a key research interest in educational and psychological research (Adams, 1990). Historically, most research focused on the cognitive facets of reading such as phonemic awareness, vocabulary, fluency, and comprehension (Gough & William, 1986; LaBerge & Samuels, 1974; Perfetti & Stafura, 2014; Rayner et al., 2001; Snow et al., 1998). Stanovich (1986) noted that almost every cognitive task that involves the act of reading has been inspected. Additionally, multiple studies have been conducted into the best ways of giving reading instruction to different types of students, like studies into reciprocal teaching (Palincsar & Brown, 1983) and reading strategy instruction (Edmonds et al., 2009; Solis et al., 2012).

Improving reading literacy is not solely dependent on reading instruction or reading activity in school. Reading behavior outside school is also thought to improve reading literacy. For example, leisure time reading is known to contribute to the development of a broader vocabulary, which in turn enables more efficient reading. Frequency of leisure time reading explains 12% of variation in vocabulary of toddlers, 13% in 4th and 5th grade children, 19% in 6th grade and middle school, 30% in high school and 34% at university level (Mol & Bus, 2011).

Given the importance of leisure time reading for reading literacy and consequently, for educational careers, social participation and lifelong learning, it is essential to note that there is an overall decline in time devoted to leisure time reading. Each generation reads less than the generations before them did. New generations are shifting their attention to other leisure activities, such as watching television or doing sports (Cloin, 2013; Salter & Brook, 2007). Within generations, individuals read less as they grow older (Huysmans, 2013; Piek & Vonkeman, 1995). Van Schooten (2005) showed that in 7th, 8th and 9th grade, Dutch students in the lowest stream of secondary education only spend an average of 37 minutes per week reading for leisure and students in the highest stream 92 minutes.

In order to counter this negative trend in leisure time reading, it is helpful to know why individuals read for leisure. From the research literature we know for instance that success at the outset in acquiring reading skills (Stanovich, 1986) and motivation are important (Wigfield et al., 1996). It is assumed that motivation and experiencing success stimulate each other (It is thought that in 1st to 6th grade (age 6-11) and 6th to 8th grade (age 11-13), children's attitude towards reading or children's motivation to read affects levels of reading ability because of the influence on reading behavior (McKenna et al., 1995; McKenna et al., 2012). In addition, McKenna et al., (1995) and also Mitchell and Ley (1996) report that children in 9th to 12th grade with a higher reading literacy show a more favorable attitude toward leisure time reading.

Given the supposedly causal relation between reading attitude or motivation and leisure time reading, it is not remarkable that with the decline in leisure time reading, students' interest in reading also declines as they grow older (Nielen & Bus, 2015). Lepper (2005) reported that students' general intrinsic motivation decreases with age, as did Unrau and Schlackman (2006). PIRLS-scores show that 33% of 4th grade students in the Netherlands are not at all motivated to read (Gubbels et al., 2017), which is in line with earlier PIRLS-studies (Meelissen et al., 2012). In the Netherlands, Van Elsacker and Verhoeven (2003) found a decline in reading motivation as early as 3rd grade. Reading motivation seems to be stable in the middle grades of elementary education (3rd, 4th and 5th grade) and decreases in 5th and 6th grade (Tuijl, 2015).

This decline in reading motivation is a general concern for policy makers, educational professionals and parents (Eccles et al., 1993; Inspectie van het Onderwijs, 2014). In the Netherlands, in the past decades, reading promotion activities and interventions aimed at students and often of a targeted and recurring nature (e.g., projects like Boekstart (*Book Start*), and Bibliotheek op School

(*Library in School*)) have been initiated, at national and local level. The Dutch term for these policies is 'reading promotion' ('leesbevordering') which has been in use since the eighties (De Vries & Ohlsen, 1998). New institutions that specialize in reading promotion were set up in the Netherlands. One of these was the Stichting Lezen (*Foundation for Reading*), which in 1993 became the national platform for reading promotion.

In the Netherlands, the diversity in activities to promote reading might be relatively large, since Dutch elementary schools and their teachers are to a large extent free to shape their curricula. Therefore, both the time spent on reading as well as in the methods applied to reading (Gubbels et al., 2017) differ per teacher. Also, many Dutch elementary schools do not always show a systematic and structural approach to reading promotion (Oberon, 2009), which could also help explain the diversity in reading promotion deployed by teachers and in the time spent on different forms of reading promotion.

Until now, not much research has been carried out on the precise role of the teacher as promoter of reading in the classroom and stimulator of out of school reading. Dutch teachers reported in 2004 that they spend comparatively more time on reading promotion activities than teachers in 1998 (Heesters et al., 2007). PIRLS 2011 additionally reports that Dutch 4th grade teachers spend more time on reading aloud in school and on free reading time compared to reports from 2001 (Meelissen et al., 2012). However, PIRLS 2015 results indicate that teachers read aloud less often, as do their students, compared to 2011 (Gubbels et al., 2017).

There are many ways in which teachers may try to stimulate their students' leisure time reading. Teachers themselves report that giving their students opportunities to read texts that are interesting to them, is the primary instrument for encouraging them to become autonomous and fluent readers (Nielen, 2016; Sweet et al., 1998). Studies have shown that talking to students about books (Humphrey et al., 1997), reading a wide variety of materials aloud every day (Dreher, 1999) or letting students read by themselves every day (Nielen, 2016), is recommended. Turner and Paris (1995) showed that allowing students to interact with each other about their reading stimulates reading motivation and bolsters the confidence students have in their own reading abilities. Teachers may also function as a role model for their students (Burgess et al., 2011; Dreher, 1999; Sweet et al., 1998; Turner & Paris, 1995). Many different reading promotion activities are also mentioned in course books for teacher training colleges (Paus & Bacchini, 2010; Van Coillie, 2007). In contrast with these numerous suggestions there is little or no information available about the actual

implementation of these activities in the Netherlands (Bonset & Hoogeveen, 2009).

The present study therefore aims to answer the question as to which reading promotion activities are performed in 5th and 6th grade in the Netherlands and how often these activities are performed. Since there is a decline in reading motivation starting in 4th grade, the so called '4th grade slump', the focus is on 5th and 6th grade (Chall, 1983; Tuijl, 2015).

Research Questions

The first research question addresses tendencies and variation: *Which reading promotion activities are performed by 5th and 6th grade teachers in the Netherlands and how often are different reading promotion activities used by 5th and 6th grade teachers in the Netherlands?*

Once the reading promotion activities used in school are known, different clusters of types of reading promotion activities may be discerned. These identified clusters of reading promotion activities indicate that teachers are inclined to perform several reading promotion activities simultaneously. This in turn reveals different types of teacher behavior when it comes to reading promotion. The clustering of different reading promotion activities combined with different patterns of behavior by teachers, facilitates future research into the effects of different types of reading promotion activities on reading attitude, behavior and proficiency of students. The second research question, addressing structure, is therefore: *Are there different clusters of classroom reading promotion activities for 5th and 6th grade teachers in the Netherlands?*

Once these two questions are answered, the question that arises next is whether characteristics of teachers and of the students they teach are related to the frequency with which teachers act out different types of reading promotion activities. Teachers may adjust their behavior to the needs or preferences of the students they teach. For instance, the differences in reading promotion behavior may be related to the educational stream or the class composition, i.e. the proportion of girls or the proportion of students from a high social economic status. Also, teachers' personal preferences might affect their behavior. This could be reflected in a relationship between reading promotion behavior and the teachers' age or teaching experience. Hence the third and final research question, addressing correlates, is: *What teacher or class characteristics impact reading promotion activities performed by 5th and 6th grade teachers in The Netherlands?*

Method

Design

The design of the study is cross-sectional. A survey was held among 5th and 6th grade elementary school teachers in the Netherlands.

Instrument

To construct the questionnaire items for measuring the variety and frequency of performed reading promotion activities (research question 1), oral interviews were conducted with four 5th and 6th grade teachers and with three lecturers at a teacher training college. To include the views of policy makers and institutions for reading promotion, a representative of the Dutch Ministry of Education was also interviewed, as well as two representatives of two Dutch foundations aimed at reading promotion (Foundation for Reading (*Stichting Lezen*) and Art of Reading (*Kunst van Lezen*)). The ecological validity of the questionnaire was maximized by means of the interviews (Bryman et al., 2009).

The interviews handled both reading promotion in class and the characteristics of an environment favorable to reading. For all these interviews a semi-structured interview guide was drawn up, based on governmental documents and teacher trainer books offering reading promotion (Meelis-Voorma et al., 2012; Paus & Bacchini, 2010; Van Coillie, 2007). The list of reading promotion activities resulting from the interviews, was complemented by activities mentioned in government documents on reading promotion (Stichting Lezen, 2012).

Based on the results of the interviews and the literature, items for measuring variety and frequency of reading promotion activities were created. The items addressed several categories, which are described in the following paragraph. Most of the items (44) consisted of statements with 5-point Likert scales ("never", "a few times a year", "monthly", "weekly" and "daily"), a few items (5) could only be answered with either "yes" or "no".

All items were piloted with two female 5th and 6th grade teachers, one with five and the other with sixteen years of elementary school teaching experience. Both had a degree in elementary school teaching, one of them also had a university degree in English literature. During this pilot, some rephrasing was done and some extra instruction was added (e.g., how to fill in the questionnaire if you work part-time, the difference between teaching reading comprehension or reading education and reading promotion).

In addition to information concerning the activities teachers perform, background information was collected to answer research question three. Questions about background variables of teachers related to gender, age (in days), educational background, number of years of teaching experience, the grade taught, whether the teacher works part-time, the number of students in class and percentage and number of girls, non-native Dutch speakers and students in schools of low, medium and high socio-economic status.

The resulting questionnaire contained 49 items on reading promotion activities classified into six a priori categories:

- 1) Reading promotion activities in classrooms for fiction, including items on interaction and the teacher as a model (e.g. How often do you dedicate free reading time to fiction?)
- 2) Reading promotion activities in classrooms for nonfiction, based on the notion of incorporating nonfiction texts (e.g. How often do you dedicate free reading time to a nonfiction text?)
- 3) Extracurricular activities, such as a trip to the library (e.g. How often do you visit the Museum of Children's Books?)
- 4) Use of different kinds of fiction genres and materials, (e.g. How often do you use poetry?)
- 5) Use of different kinds of nonfiction genres and materials (e.g., How often do you use newspaper articles?)
- 6) Participation in national programs (e.g., Do you participate in the Children's Book Week?)

Sample

To answer the first research question, a representative random sample of 100 elementary schools was drawn from the population list of 6901 elementary schools in the Netherlands. A total of 69 schools participated in the research, which gives a response rate of 69%. Schools were requested to ask a 5th and a 6th grade teacher to complete the questionnaire. In some schools, the same teacher taught both 5th and 6th grade students. In total, 85 5th and 6th grade teachers of the 69 participating schools returned the questionnaire. Since the aim was to obtain a representative sample of elementary schools, and teachers working in the same school are probably more alike than teachers from different schools, for the analyses aimed at answering the first research question, the data of these 85 teachers are aggregated within schools.

To verify whether the results lend themselves to generalization, some characteristics of the responding schools are compared to the same characteristics of all elementary schools in the Netherlands. Population characteristics of elementary schools made available by the Dutch government were used. The characteristics used are respectively percentages of students in school of low, medium and high social economic status, the location of schools in different provinces, the type of school¹, and the total number of students in school. The analyses used for the evaluation of the generalizability of the school sample are correlations and cross tables with chi-square tests.

The comparison of schools in the sample (data aggregated over schools, n=69) with all other elementary schools (n=6832) in the Netherlands showed that the responding schools did not differ significantly from all elementary schools in the Netherlands for any of the characteristics. Correlations were virtually zero between a dummy variable indicating whether a school belongs to the sample and the percentage of students of low ($r = -.017$; $p = .160$; $n = 6901$), medium ($r = -.003$; $p = .815$; $n = 6901$), and high social economic status ($r = .014$; $p = .253$; $n = 6901$) respectively. Also, school size, of schools in the sample and not in the sample, did not differ significantly ($r = .013$; $p = .266$; $n = 6901$). Similarly, the geographical dispersion of schools ($\chi^2 = 7.696$; $df = 5$; $p = .174$; $n = 6901$), and the distribution of school type ($\chi^2 = 1.916$; $df = 3$; $p = .590$; $n = 6901$) in the sample, resemble the population. These results support the claim that the school sample is representative for The Netherlands.

A representative sample was not necessary for answering research question two and three, since these exploratory questions are about relationships between constructs and are aimed at generating theory and not at generalizing results to a specific population of teachers. To obtain sufficient power for conducting an exploratory factor analysis, the representative sample was extended with a convenience sample of 5th and 6th grade teachers. This resulted in 109 extra questionnaires of 5th and 6th grade teachers from 88 different elementary schools. The data obtained in this way was merged with the data of the random sample, but now non-aggregated, adding up to a total of 194 respondents for research questions two and three.

¹ In the Dutch educational system next to public schools, there are schools with a religious affiliation (Protestant, Catholic, Muslim etc.) and schools with a specific didactic pedagogical approach (Montessori, Dalton et cetera).

Of the 85 teachers in the representative sample of 69 schools, 35 are male (41%) and 49 female (58%), 34 (40%) were 5th grade teachers and 27 (32%) were sixth grade teachers, 24 (28%) taught a combined class of both 5th and 6th grade students (percentages do not add up to 100%, since teachers did not answer all questions). The sample included both novice and experienced teachers. The mean of years of teaching experience for the entire group was 18.4 with a standard deviation of 12.1. The average age of the respondents was 44.4 years with a standard deviation of 12.3 years. 63 (74%) of them worked part-time and shared their position in 5th or 6th grade with a colleague. 76 (89%) teachers were trained at a polytechnic, 7 (8.2%) were university trained teachers.

Of the combined sample of 194 teachers, 66 (34%) respondents are male and 121 (62%) female, 62 (32%) taught 5th grade, 78 (40%) taught 6th grade and 48 (25%) taught both 5th and 6th grade. The mean years of teaching experience for the entire group was 15.7 years with a standard deviation of 12.7 years. The average age of the respondents was 41.0 years with a standard deviation of 13.2 years. 125 (64%) respondents worked part-time, 173 (89%) were trained at a polytechnic and 15 (8%) were university-trained teachers.

Procedure

After receiving permission from the principals of the schools, the paper versions of the questionnaires were sent out, accompanied by an introductory letter with instructions and a stamped return envelope. Schools preferring a digital version received an e-mail identical to the introductory letter and the web address of the questionnaire. The introductory letter or e-mail informed teachers about the purpose and procedure of the research and stated that all information would be reported anonymously to protect teachers' privacy and encourage them to provide authentic responses (Alreck & Settle, 1995).

Data analyses

To answer the first research question, means and standard deviations are computed for each of the items measuring the frequency of performing reading promotion behavior. As stated above, the data from the 85 teachers of the 69 schools of the representative sample are aggregated over schools.

To answer the second research question an exploratory factor analysis (Principal components analyses or PCA) was deployed, using the scores on the behavior items in the total sample of 194 teachers. To check whether the variables

are normally distributed, Kolmogorov-Smirnov test was used to identify the extent to which distribution deviated significantly from normality. All items appeared to deviate significantly from normality. This is partly caused by the large power ($n=173$). In addition, we tested whether item scores are exactly and not roughly normally distributed. The histograms with the normal distribution plotted over them show that some items really deviate from normality and that others are normally distributed. Some caution in generalizing our results is warranted.

In the PCA only 44 items were used that are measured with a 5-point Likert scale. We consider these variables to be ordinal approximations of continuous variables (Johnson & Creech, 1983; Norman, 2010; Sullivan & Artino, 2013; Zumbo & Zimmerman, 1993).

We used direct-oblimin rotation, because components are expected to correlate. Components in reading promotion behavior are distinguished based on the Eigenvalue of the component (>1) and the scree-plot and they are conceptually interpreted based on the loadings in the rotated pattern- and structure-matrix. Prior to the interpretation of the components, the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) was checked, as were the diagonal elements of the anti-image matrix (all should be $>.5$), to ascertain whether the number of respondents is sufficient for the PCA. Also, we checked whether the variables in the PCA are sufficiently correlated by means of Bartlett's test of sphericity (should be significant). Based on the results of the PCA, different types of reading promotion behavior are distinguished. For each type distinguished, the items with relatively high loadings on the specific component and relatively low loadings on other components were summed to create a variable for each type of reading promotion behavior. To this end, both the pattern and the structure matrix were inspected. For items that loaded relatively high on several components, the content of the items was also sometimes used to allocate them to a variable. Means are divided by the number of items summed, so that means can be interpreted on the original five-point Likert scales. For each sum, Cronbach's alpha was calculated as an indication of its reliability. Only sums with alphas larger than .6 are used for subsequent analyses to answer research question three. To answer this question, correlations were calculated between the aforementioned sums representing a component found in the PCA and the background variables of teachers and classes. However, not all correlations pertain to sums of items. When a component shows only one high item loading, correlations were computed between the single item concerned and the background variables.

Results

Tendencies and variation

To determine the different reading promotion activities and their frequencies (research question one), mean frequency scores indicating the application of different reading promotion activities, class activities, use of materials, and participation in national programs were calculated. As mentioned in the method section, six a priori categories of reading promotion were distinguished in the questionnaire. Results are reported per category and simultaneously compared to the other categories. Each paragraph starts off with a general impression and then reports results of specific frequent and non-frequent items of the questionnaire.

Category 1: promotion activities for reading fiction in classrooms

In Table 1, the activity reported to happen most frequently (daily) is giving free reading time (item no. 1). In Table 1, we also see that on average, 5th and 6th grade teachers report that they stimulate students to read children's books more than once a week (item no. 2). The same holds for reading children's books to the class (item no. 3). On average, advising students on children's books is reported to happen more than once a month, as are book presentations by students (items no. 4 and 5).

Somewhat less frequent is the promotion of specific children's books by the teachers themselves, which is reported to occur on average once a month (item no. 7). Teachers organize book talks even less frequently, on average just a few times a year (item no. 17). In Table 1 we can see that 'tutor-reading by older peers' happens on average once a month (item no. 6). Given the amount of preparation involved in organizing tutor reading, this is still quite frequent.

As is shown in Table 1, the item 'teacher reads while the class also reads', is reported to happen on average once a month (item no. 12), which is not very often since students read daily. Perhaps due to their workload, teachers prefer doing other work like correcting assignments, or perhaps they do not realize that setting an example can be considered to be a way of reading promotion. Looking at the relatively large standard deviation, it could be concluded that some teachers often read while the class reads and others almost never.

Table 1

Mean frequencies of performing reading promotion activities regarding fictional texts in 5th and 6th grade (n=69). Items consisted of statements with 5-point Likert scales: Do you.../ do you perform/ do you let students. Meaning of Likert scale: 1= "never", 2= "a few times a year", 3= "monthly", 4= "weekly" and 5= "daily"

Activity	M	SE	SD
1. Give 'free reading' time	4.76	.05	.41
2. Stimulate students to read children's books	4.51	.06	.52
3. Read children's books to the class	4.28	.10	.86
4. Let students give book presentations	3.45	.14	1.15
5. Recommend on children's books	3.43	.12	1.01
6. Tutor-reading by older peers	3.31	.14	1.19
7. Promote children's books	3.12	.11	.94
8. Reading and declamation	3.12	.13	1.10
9. Assess children's books	2.98	.15	1.21
10. Introduce children's books	2.96	.11	.93
11. Buy new children's books	2.91	.12	1.03
12. Read while the class reads too	2.89	.18	1.50
13. Talk to parents about the children's reading behavior at home	2.74	.13	1.09
14. Introduce classics	2.39	.10	.84
15. Use processing tasks on children's books	2.35	.13	1.08
16. Let students make a reading portfolio	2.31	.17	1.42
17. Organize book talks	2.22	.13	1.10
18. Give 'free reading time', using compulsory books	2.14	.17	1.39
19. Invite writers to class	2.05	.13	1.06

Overall, more than half of the reading promotion activities for fiction texts are carried out only a few times a year on average. For some of these activities, this may be due to organizational or financial issues: inviting a writer to class (item no. 19) or buying the copies for compulsory book reading takes time and money (item no. 18). For other activities the reported incidence in class seems rather low.

Category 2: promotion activities for reading nonfiction in classrooms

Table 2 shows those promotion activities related to nonfiction texts that are performed less often than the activities mentioned in Table 1. Reading a nonfiction text aloud in class (Table 2, item no. 1) is reported to happen on average once a month, compared to more than once a week for reading fiction aloud to the class. While allocating free reading time to read fiction texts is reported to happen daily (Table 1, item no. 1), this same activity is reported to be carried out on average once a month (Table 2, item no. 2) for nonfiction texts. Also, fiction books are bought more often (Table 1, item no. 11) than nonfiction books (Table 2, item no. 5) and for fiction, advice about which books to read also is given more often than for nonfiction (Table 1, item no. 5 and Table 2, item no. 4). However, free reading of compulsory texts happens almost monthly for nonfiction (Table 2, item no. 3), whereas free reading of compulsory fiction texts is done on average a few times a year (Table 1, item no. 18). Possibly, the reading of nonfiction texts pertains to texts related to subjects like geography, history and biology. More variety of text genres can be found in Table 4.

Table 2

Frequencies of performing reading promotion activities (nonfiction texts) in 5th and 6th grade (n=69). Items consisted of statements with 5-point Likert scales: Do you.../ do you act out/ do you let students. Meaning of Likert scale: 1= "never", 2= "a few times a year", 3= "monthly", 4= "weekly" and 5= "daily"

Activity	M	SE	SD
1. Read a nonfiction text (article from a newspaper or magazine) aloud in class	3.19	.14	1.13
2. Give 'free reading' time for a nonfiction text	3.11	.12	1.00
3. 'Free reading' of compulsory nonfiction texts	3.02	.14	1.16
4. Advise students on nonfiction texts	2.95	.11	.92
5. Buy nonfiction texts (e.g. magazines about football, animals, countries etc.)	2.60	.12	.98
6. Point out websites	2.35	.13	1.06

Category 3: extracurricular activities

In addition to activities that take place within the classroom, the questionnaire contained questions about extracurricular activities (see Table 3). The activities in Table 3 occur on average at most a few times per year. This is not surprising, since these activities cost money and a lot of time and preparation. The library (Table 3, item no. 1) and the theatre (Table 3, item no. 2) are visited with a class on average once a year. Actual class visits to the bookshop (Table 3, item no. 3) or museum (Table 3, item no. 4) hardly ever occur. The theater visit might also refer to the tradition in the Netherlands of organizing an end of year musical for 6th grade students, which might explain why this class activity is carried out on average once a year.

Table 3

Frequencies of performing extracurricular reading promotion activities in 5th and 6th grade (n=69). Items consisted of statements with 5-point Likert scales: Do you visit.... Meaning of Likert scale: 1= "never", 2= "a few times a year", 3= "monthly", 4= "weekly" and 5= "daily"

Activity	M	SE	SD
1. A library with your class	1.85	.10	.82
2. The theatre	1.83	.07	.55
3. A bookshop	1.07	.05	.40
4. The Museum of Children's Books	1.00	.00	.00

Category 4 and 5: use of different types of fiction and nonfiction genres and material

Table 4 illustrates the frequencies of the use of different materials. Two types of material are not included in Table 4, since they are already mentioned in Table 1 and 2: children's books and nonfiction texts in general. The materials in Table 4 are specifications of these two types. A noticeable result is that comics are used most frequently (Table 4, item no. 1), followed by short stories (Table 4, item no. 4). Apart from comics, relatively high mean frequencies are found for nonfiction materials: instructional texts, newspaper and magazine articles (Table 4, items no. 2, 3 and 5). Given the results presented in Table 1 and 2, in which the highest frequencies are found for fiction reading, this is surprising. Newspaper and magazine articles might be chosen to prepare the young adolescents for

society. Instructional texts are probably used to prepare students for secondary education. Less used genres are theater scripts (Table 4, item no. 10), filmed books (Table 4, item no. 11) and audio books (Table 4, item no. 15). The low frequency for the use of theater scripts might be explained by the fact that these may be difficult to read, especially for 11-year-old students. The use of audio and filmed books presupposes technical facilities that, if present at all, must be shared by the whole school. Computers, tablets and e-readers are used on average a few times a year (item no. 9). The standard deviation for this score is large, meaning that there is a relatively large difference in computer use between schools.

Table 4

Frequencies of use of materials for reading promotion in 5th and 6th grade (n=69). Items consisted of statements with 5-point Likert scales: Do you use Meaning of Likert scale: 1= "never", 2= "a few times a year", 3= "monthly", 4= "weekly" and 5= "daily"

Activity	M	SE	SD
1. Comics	3.51	.12	.99
2. Instructional texts	3.33	.10	1.19
3. Newspaper articles	3.27	.13	1.05
4. Short stories	3.22	.11	.91
5. Magazine articles	2.97	.13	1.11
6. Use of internet to search for background information on writers or children's books	2.77	.13	1.09
7. Poetry	2.66	.10	.85
8. Website texts	2.61	.13	1.04
9. Computers, tablets, e-readers for reading activities in class	2.49	.14	1.15
10. Theater scripts	1.98	.09	.78
11. Filmed books	1.93	.10	.86
12. Themed tables in the classroom	1.89	.11	.92
13. Magazines about reading	1.89	.11	.87
14. Use of internet to search for books	1.70	.12	.96
15. Audio Books	1.62	.10	.83

Category 6: Participation in national programs

Category 6 shows the participation of Dutch teachers in national programs. These programs are well known in the Netherlands. Nearly every teacher participates in the Children's Book Week (item no. 1). This is a national event in which elementary schools in the Netherlands can request free packages containing prepared lessons and subsidized books. The Children's Jury books (item no. 2) are books selected by children aged 6-12, on which children can vote to select a book of the year; these are also accompanied by prepared lessons packages. Teachers participate just as often as not in programs such as the Reading Aloud Breakfast (item no. 3) and the Year of Reading Aloud (item no. 5).

Table 5

Frequencies of performing reading promotion activities (national programs) in 5th and 6th grade (n=69). Do you pay attention to... (1=yes; 0=no)

Activity	M	SE	SD
1. Children's Book Week	.97	.02	.17
2. The Children's Jury	.79	.05	.41
3. The Reading Aloud Breakfast	.59	.06	.50
4. Literary prizes	.58	.06	.50
5. The Year of Reading Aloud	.48	.06	.50

Structure

Now that the variation and frequency of use of different reading promotional activities are known and data is available, these activities can be looked at in more depth. To answer research question two (are there different clusters of classroom reading promotion activities for 5th and 6th grade teachers in the Netherlands?) an exploratory factor analysis (Principal Components Analysis or PCA) was conducted over 173 cases, since 20 cases showed one or more missing values on the 44 items.

The necessary preconditions for conducting a PCA are met: the Kaiser-Meyer-Olkin measure is .832, and all measures of sampling adequacy (diagonal of the anti-image correlation matrix) for individual items are larger than .5 except one (.437; 'free reading of a book of own choice in class'). We can therefore conclude that the sample is large enough to conduct a PCA. Bartlett's test of sphericity is significant ($\chi^2 = 2991.326$, $df=946$, $p=.000$), so the correlations between items are large enough for PCA. The PCA shows that there is a lot of common variance in

the items, since before rotation, the eigenvalue of the first component (10.385) is much larger than the eigenvalue of the second component (2.649). This means we can regard the sum of all items as indicative of one trait, the extent of performing reading promotion activities in general.

However, the PCA also showed clusters of reading promotion activities performed by teachers: 13 components had eigenvalues over Kaiser's criterion of one; in combination these components explained 64.78% of total variance, which exceeds the recommended criterion of 60% (Hair et al., 1998). Most of the items fitted well in the solution; communalities range between .50 and .76. Correlations between these 13 components are rather low (they range between -.214 to .258). Based on the above, we can answer the second research question affirmatively (*Are there different clusters of classroom reading promotion activities of 5th and 6th grade teachers in The Netherlands?*). Appendix A includes a table showing which items are combined into a variable based on the results of the PCA. Items are never assigned to more than one variable.

To interpret the components found with respect to their content, the items that show a relatively large loading on a component in both the pattern and structure matrix, and relatively low loadings on all other components, are inspected to find a conceptual interpretation of each component.

Cronbach's alpha is computed for each variable consisting of a group of items that identify a component. Since we found a lot of common variance in all items (eigenvalue first component), alpha is also computed over all items. The items are summed to be used as a variable in subsequent analyses, only if alpha is larger than .6. The alpha over all 44 items is .92 with a range in item test correlations of .048 - .709 (n=173). This high alpha over all items indicates that the sum of all items can be used as a reliable indication of the performance of reading promotion activities in general.

Component one is determined by six items related to *Introducing texts* by teachers. These six items ($\alpha=.81$, n=189) represent the most basic form of reading promotion as opposed to the use of new media for example. In the interviews that were held to underpin the validity of the questionnaire items, introducing texts was mentioned every time. These forms also appear in most official recommendations for performing reading promotion activities (Stichting Lezen, 2012).

Component two has the largest loadings of two items about *Using new media* ($\alpha=.66$, n=194). This means that teachers who score relatively high on the use of computers, tablets and e-readers for instance, also are more inclined to use website texts. It appears that innovation is an 'all or nothing' type of activity.

The third component refers to teachers *Organizing outings and obligatory reading*. In the three items loading high on this component ($\alpha=.22$, n=192), the teacher takes students out of school to a bookstore or a museum or gives obligatory books to read in class.

Only two items show high loadings on the fourth component ($\alpha=.44$, n=194). These items refer to *Using audio books and a themed table*.

The fifth component is determined by four items ($\alpha=.73$, n=192), and represents *Using nonfiction* in class, e.g., newspapers, magazines articles and reading nonfiction aloud or in free-time reading.

The sixth component is characterized by two items regarding *Organizing obligatory activities* for students and teachers, such as visiting the library and theatre ($\alpha=.35$, n=193).

The seventh component has six items that reflect the input of writers, talking to parents and buying new books: *Inviting parents & writers, buying reading material* ($\alpha=.81$, n=186). This includes buying new (fiction and nonfiction) books and inviting writers to class, but also talking to parents about reading promotion and students' reading behavior.

The eighth component has only one item and concerns *Using the internet to search for books* (n=193).

The ninth component has high loadings of three items, all related to *Stimulating free reading*, for example reading as a teacher while the class reads and giving free-time reading with a self-chosen children's book ($\alpha=.33$, n=192).

The tenth component has high loadings of six items, of which five represent a rather classical approach to reading promotion or even literary education and is captured as *Reciting*. These items relate to using poetry and drama, reciting texts and using magazines about reading, as well as searching the internet for information about authors. The one item loading high on this component that is different is about giving advice on what nonfiction texts to read. Teachers who use a more classical, highbrow approach to reading promotion, might also feel the need to advise students about which nonfiction texts they should or should not read ($\alpha=.75$, n=188).

The eleventh component is determined by two items ($\alpha=.56$, n=191), all related to *Using short stories*, short texts chosen by the teacher that students must read.

The twelfth component has only one item: *Using comics* in class.

The thirteenth component is formed by six items related to *Organizing student tasks and where to find answers*, i.e. letting students assess fiction and give book presentations, and organizing book talks and tutor-reading, but also pointing

out websites about books and using movies about books ($\alpha=.76$, $n=191$). All these items are about getting students to think about books.

The answer to research question two is that reading promotion, although fairly homogeneous ($\alpha=.92$, as stated above), can be seen as consisting of at least 13 different sub types of behavior. Some components (7, 10 and 11) contain items about both fiction and nonfiction, which suggests that, as far as promoting these forms of reading is concerned, there is no difference between fiction and nonfiction texts in the mind of the teachers. Factors such as time can play a role when it comes to *Using short stories* in class (component 11), be it a short story (fiction) or an instructional text (nonfiction); both fit into the teacher's, at times, tight schedule.

Correlations between the various components are low (range $-.269$ to $.369$). These results also imply that, as far as reading promotion is concerned, there are different types of teachers. The question as to which teacher and class characteristics coincide with the different forms of reading promotion, is answered in the next section.

Correlates

To answer research question three (*What teacher or class characteristics relate to the different types of reading promotion activities as performed by teachers?*), sums of items were created as indicators for the different aspects of reading promotion behavior found in the PCA as well as a sum over all items. To answer research question three only sums with alpha's larger than $.60$ are used. This means components (3, 4, 6, 8, 9,11,12) are not included in the analyses to answer this question. Correlations were calculated between the remaining 6 sums and background variables of teachers (gender, age, educational background, number of years of teaching experience, grade they teach, whether they work part-time) and class characteristics (the number of students in class and the class percentages and numbers of girls, non-native Dutch speakers and students of low, medium and high social economic status in the school). Also, correlations were computed between these variables and all the items not included in the above-mentioned sums.

Looking at correlations between background variables and components, no significant correlations are found between component 7 (Inviting parents & writers, buying reading material) and any of the used background variables.

Small, but significant, correlations are found between *Introducing texts* (component 1) on the one hand and the percentage of students of medium SES in class ($r = .16$; $p=.024$; $n=185$) and the percentage of girls in class ($r = .17$; $p=.018$; $n=183$)

on the other. This implies that teachers spent more time introducing texts when they have more girls in class and more students of medium SES.

Using nonfiction (component 5) is significantly correlated with the percentage of girls ($r=.17$; $p=.018$; $n=186$) and the number of girls in class ($r=.20$; $p=.006$; $n=187$) and with teachers' gender: male teachers make less use of nonfiction in class ($r=-.17$; $p=.023$; $n=185$).

Reciting (component 10) is significantly correlated with the age of teachers ($r=.16$; $p=.042$; $n=169$).

Lastly *Organizing student tasks and where to find answers* (component 13) was significantly correlated with the percentage of girls in class ($r = .16$, $p=.003$, $n=185$).

Correlations were calculated between all the teacher and class characteristics and the individual items that were omitted from the aforementioned sums. Results show that male teachers spend more time on going to the Museum of Children's Books ($r = .16$, $p=.034$, $n=186$), and more often let students read their own choice of books ($r = .15$, $p=.046$, $n=187$). Also, older teachers give more attention to search machines on the internet ($r = .25$, $p=.001$, $n=174$), and make less use of themed tables ($r = -.24$, $p=.001$, $n=175$). More experienced teachers spend less time on going to the Museum of Children's Books ($r = -.21$, $p=.003$, $n=189$) and use themed tables less ($r = -.27$, $p=.001$, $n=191$). Themed tables are used when teachers split their work week with a colleague ($r = .60$, $p=.028$, $n=191$), and these teachers use comics less ($r = -.15$, $p=.041$, $n=191$). Teachers with students of a high SES read less often themselves, to set an example ($r = -.17$, $p=.017$, $n=189$).

In classes with more female students, more time is spent on audio books ($r = .20$, $p=.006$, $n=189$). The percentage of girls in class also correlates positively with using the internet to search for books ($r = -.18$, $p=.015$, $n=187$). More male students in class coincides with less reading time for the teacher ($r = -.15$, $p=.050$, $n=185$) and fewer visits to the Children's Museum ($r = -.16$, $p=.033$, $n=184$). The percentage of boys in class also correlated negatively with the use of audio books ($r = -.18$, $p=.013$, $n=185$) and using the internet to search for books ($r = -.18$, $p=.013$, $n=184$).

Both the number and percentage of students in class whose first language is not Dutch correlates with the frequency of class trips to the Museum of Children's Books (number: $r = .37$, $p=.000$, $n=190$; percentage $r = .34$, $p=.000$, $n=189$) and with giving time to read obligatory children's books (number: $r = .21$, $p=.004$, $n=192$; percentage $r = .20$, $p=.006$, $n=191$).

Also, the number of non-native students in class is related to less stimulation to read from the teachers ($r = -.16$, $p = .027$, $n = 190$).

Conclusion and discussion

This study shows that there are multiple types of reading promotion activities that teachers use in 5th and 6th grade classrooms in the Netherlands. Teachers seem to focus mainly on promoting the reading of fiction texts. This is in line with earlier findings of PIRLS-2016 (Gubbels et al., 2017). Traditionally in the Netherlands, reading promotion was associated with promoting the reading of literary fiction books (Stichting Lezen, 2012; Van Schooten, 1997). More recently, the promotion of a wider variety of text genres, fiction and nonfiction, is recommended by the Foundation for Reading (Stichting Lezen, 2012). Similarly, international studies indicate that reading promotion in practice is primarily aimed at promoting fiction and that the scope of reading promotion should be broader (Barone & Morrow, 2003; Chapman et al., 2007; Duke, 2000, 2003, 2004; Duke & Bennett-Armistead, 2003; Flowers & Flowers, 2009; Moss & Hendershot, 2002; Reutzel & Gali, 1997; Saul & Dieckman, 2005; Yopp & Yopp, 2006). The results of this study are to some extent mixed, as they show that activities related to the promotion of fiction and those pertaining to nonfiction are sometimes clustered in the same components, while other components are exclusively identified by solely fiction or solely nonfiction items. This pattern is intriguing, since broadening the scope of text genres aimed at by reading promotion may also be important for encouraging boys to read. We know that, on average, boys read nonfiction texts more often than girls (Mullis et al., 2012). Teachers in our study report that they make use of newspapers, instructional texts and magazine articles more than once a month, and the relative popularity of comics and magazine articles is in line with findings of PIRLS 2011 and 2016, which report that children in 4th grade read more comics and magazines at home than they did in 2001 (Mullis et al., 2012; Gubbels et al., 2017). A shift towards a wider variety of text genres used in class might be occurring.

Another noticeable result is that activities related to free reading are reported most frequently. Free reading implies that students are free to choose texts they are interested in. In this, teachers in the Netherlands follow the advice of Sweet et al. (1998), who state that providing chances to read texts that are interesting to students is the primary instrument for encouraging them to become autonomous and fluent readers. Also, results from Van Schooten (2005) showed that the

best way to promote student reading is to ensure students have the experience of reading being enjoyable. The relative frequent use of comics and short stories in class may indicate that teachers do try to promote reading by choosing genres students like.

Activities that take more a scholastic approach, such as using processing tasks on children's books, are performed less frequently than free reading activities. Compulsory, scholastic activities, especially when graded, can serve as a form of extrinsic motivation. Extrinsic motivation is often found to be detrimental to intrinsic motivation, which is important to reading promotion (Bénabou & Tirole, 2003).

Next, it is worth noting that activities that are reported as performed almost daily are activities that take little or no preparation. Activities that require more preparation, such as outings to the library or the theater, only happen a few times per year at most. The same applies to activities regarding fiction texts, where results show that when the teacher has to do the promoting, it happens infrequently. This is also reflected in the participation in national programs; teachers are more likely to participate when there is ready-made material to use in class. A tentative conclusion might be that teachers are more inclined to perform activities for which materials are available and that do not require a lot of preparation, which might indicate that teachers lack sufficient time to prepare reading promotion activities or that they are not fully convinced of the importance of reading promotion. It could be interesting to examine this in further research; at the same time, it could be a theme to be addressed in teacher education.

As mentioned above, libraries are visited no more than 'a few times a year'. In the Netherlands, libraries were traditionally considered an important institution for promoting reading, and the initial programs for reading promotion aimed at students were organized and carried out by librarians (Van Schooten, 1997). In recent years, many libraries in the Netherlands have been shut down because of diminishing funds available for libraries. In response, funding for schools to create their own (small) library became available. This might explain the low frequency of visits to a library reported in this study.

Results show that all reading promotion activities included in the questionnaire have a level of homogeneity and can therefore be seen as indicative of one general construct (engaging in promotion activities). This implies that it is possible to speak of teachers that invest more or less time promoting reading. Nevertheless, activities to promote reading included in the questionnaire can also be seen as consisting of at least thirteen different types of reading promotional

activities. The PCA shows that the a-priori categorization in the questionnaire of reading promotion in school, based on the literature read and interviews with teachers and governmental organizations, is not reflected in the structure of the data.

As far as reading promotion is concerned, finding different types of reading promotional activities leads to the possibility of identifying different types of teachers and teaching. First, looking into the relations between the acting out of different forms of reading promotion, teachers seem to react to the composition of the class they teach. Teachers tend to perform more and different types of reading promotion activities when the class has more girls, both in percentage and numbers; specifically, they introduce fiction texts and use nonfiction more often. These results suggest that when facing a class of mainly boys, teachers display other behavior and tend to choose activities other than promoting reading. This further widens the already existing gap between boys and girls as it has been reported in previous research (OECD, 2016). Awareness of gender differences is vital to guarantee that the activity selected is of interest to students (McGeown et al., 2015). Lastly, the larger the number and percentage of students in class whose mother tongue is not Dutch, the more frequently teachers choose to visit a museum or use obligatory reading material. These activities are maybe seen as more convenient and viewed as reading promotion. However, they prevent students reading self-chosen texts, an activity which can be quite useful in preparing these students for their educational careers.

Limitations and suggestions for future research

This study is one of the first to systematically survey teachers to see what reading promotion activities they perform. It was done by means of an exploratory study with a newly devised questionnaire. The questionnaire can be improved using the knowledge this study has generated about tendencies, variation, structures, and correlates of reading promotion activities. A subsequent version may contain a more balanced representation of the components present in the teachers' reports on their practices. Building on teachers' perception of their own reading promotion behavior is relevant because it can function as the basis of more specific observations of reading promotion patterns. A relevant question is therefore whether teachers make a distinction between fiction and nonfiction for reading promotion purposes, in other words, whether they consider reading promotion to be independent of genre. This line of research is especially important because only a small number of studies have reported on the behavior of teachers when

they aim to promote reading. More research needs to be conducted into the effects of different kinds of reading promotion on students.

In our study, we used teachers' self-reports for measuring behavior and cannot therefore exclude the possibility of a desirability or other bias. Using log files or observations of class practices over several weeks, probably gives a more valid indication of behavior (Otter, 1995) and might serve as a check on the data to be collected with the improved questionnaire.

Implications for educational practice

Teacher education programs can take several of these results into account. First, the variety in activities and materials could be highlighted in curricula, especially since different fiction and nonfiction genres generate different learning outcomes for students. Furthermore, it might be practical to demonstrate some types of activities, as the incidence of several reading promotion activities seems to be rather low. Perhaps different types of students are drawn to different types of reading promotion activities. At the same time, with these reported different aspects of reading promotion, teachers can identify for themselves what type of reading promotion they tend to use and what type of activities they might be able to use in future, in order to satisfy all types of readers, thus improving their reading enjoyment and therefore their attitude and proficiency.

Appendix A

Components of teachers' reading promotion behavior

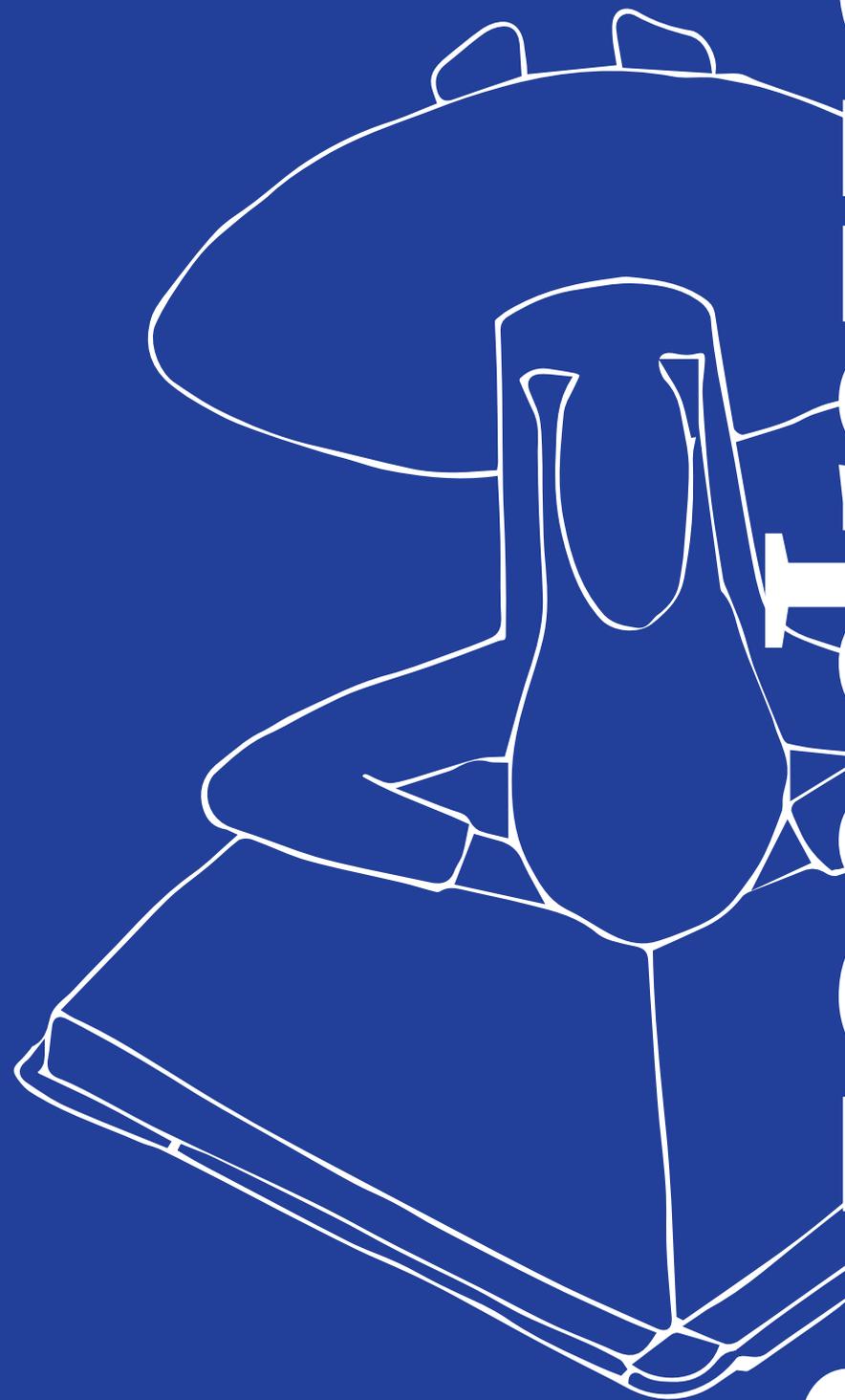
Table 6

Components of teachers' reading promotion behavior, items, Cronbach's Alpha, number of respondents (n), item-test correlations (Rit), the standard error (SE) and standard deviation (SD). Items of components with alpha's below .6 are not summed. Therefore means, standard errors and standard deviations of these items are given per item.

	n	alpha	Rit's	M	SE	SD
<i>Component 1: Introducing texts</i>	189	.810		3.12	.06	.76
Reading children's books to the class			.335			
Introducing new fiction			.648			
Introducing fiction classics			.647			
Using processing tasks on children's books			.509			
Promoting children's books			.732			
Advising student on children's books			.572			
<i>Component 2: Using new media</i>	194	.664		2.55	.08	1.06
Using computers, tablets, e-readers in class			.499			
Using website texts			.499			
<i>Component 3: Organizing outings and obligatory reading</i>	192	.222				
Visiting bookstores			.221	1.08	.02	.32
Visiting Museum of Children's Literature			.338	1.06	.02	.23
Giving free reading time with obligatory books			.267	2.36	.11	1.51
<i>Component 4: Using audio books and themed tables</i>	194	.442				
Using audiobooks			.286	1.65	.07	.93
Using a themed table			.286	2.01	.08	.93
<i>Component 5: Using nonfiction</i>	192	.733		3.05	.06	.86
Reading nonfiction aloud			.543			
Using newspaper articles			.558			
Using magazine articles			.577			
Giving free reading time with obligatory nonfiction			.429			
<i>Component 6: Organizing obligatory activities</i>	193	.354				
Visiting the library			.250	1.93	.07	.94
Visiting the theater			.250	1.78	.04	.53
<i>Component 7: Inviting parents & writers, buying reading material</i>	186	.816		2.55	.06	.83
Buying nonfiction			.597			
Buying fiction			.689			
Giving free reading time for nonfiction			.448			
Talking to parents about reading behavior			.676			

	n	alpha	Rit's	M	SE	SD
Inviting writers in class			.603			
Letting students build a reading dossier			.497			
<i>Component 8: Using the internet to search</i>	193			1.65	.07	.92
Using the internet to search for books						
<i>Component 9: Stimulating free reading</i>	192	.325				
Giving free reading time for self-chosen fiction			.267	4.39	.05	.70
Stimulating students to read			.226	4.39	.05	.70
Reading as a teacher while the class is reading			.253	3.01	.11	1.50
<i>Component 10: Reciting</i>	188	.752		2.55	.05	.70
Letting students recite			.493			
Using magazines about reading			.401			
Using poetry			.522			
Using the internet to search for background information on writers or children's books			.546			
Using drama texts			.449			
Advising students on nonfiction texts			.536			
<i>Component 11 Using short stories</i>	191	.564				
Using short stories			.406	3.30	.07	1.03
Using instructional texts			.406	3.26	.10	1.34
<i>Component 12 Using comics</i>	194					
Using comics				3.42	.08	1.12
<i>Component 13: Organizing student tasks and where to find answers</i>	191	.764		2.67	.06	.77
Letting students assess fiction			.595			
Letting students give book presentations			.493			
Organizing book talks			.577			
Pointing out websites about books			.618			
Using movies about books			.315			
Using tutor-reading by peers			.447			

Determinants
of teachers'
reading
promotion
behavior for
fiction



Journal of
Literature
3

Abstract

This study uses the Model of Planned Behavior (MPB) to find what determines reading promotion behavior of fiction texts of 5th and 6th grade teachers in primary education in the Netherlands. In the scientific literature, two different structural models are used to describe the causal relations between MPB constructs, one with a direct effect of Cognition on Behavioral Intentions and one where the effect of Cognition is mediated by Affect. We examine which of these two structural models fits best. Next, we ascertain how strongly each of the MPB constructs predicts the acting out of reading promotion. Then, we inspect how teachers score on each of the aforementioned constructs. Lastly, this study verifies the correlations between features of teachers and classes and the scores on MPB constructs.

Analyses of questionnaire data from 194 5th and 6th grade primary school teachers show that the MPB model adequately fits the data, and that a model with Cognition directly loading on Intention shows the best fit. Subjective Norm has the highest factor loading on Intention, suggesting that this construct should be the target of interventions aiming to influence teachers' Behavioral Intentions. On average, the teachers show a positive attitude towards all aspects of the MPB. Small but significant correlations are found between teacher and class features, and MPB constructs. For instance, female teachers score higher on Subjective Norm and Intention, and in classes with a higher proportion of girls, teachers perform more reading promotion activities.

Introduction

Reading literacy is an important precondition for academic achievement, given that learning depends strongly on text materials (Mason, 2004; McGeown et al., 2015; Spörer et al., 2009). Good reading ability is important for one's educational career and chances on the labor market (National Endowment for the Arts, 2007; OECD, 2007).

One important factor in the development of reading ability is voluntary reading. On average, students who read a lot in their spare time have better reading comprehension skills, wider vocabularies and better spelling and technical reading skills, than students who read less frequently (DeNaeghel et al., 2012; Mol & Bus, 2011; Mullis et al., 2017; OECD, 2009). In the available literature, voluntary reading normally refers to reading fiction. Long-term benefits of leisure time reading have also been reported, again primarily in relation to reading fiction. For example, Sullivan and Brown (2015) find that spare time reading as a child, predicts an adult's vocabulary scores and also educational and career achievement (Evans et al., 2010). The influence of the students' own reading is large and statistically significant, suggesting that the positive link between leisure time reading and cognitive outcomes is not only a result of more capable students being more likely to read a lot, but that reading for pleasure is causally linked to increased cognitive progress over time (Sullivan & Brown, 2015).

Leisure time reading is not a common habit among children. The existing evidence on trends over time suggests that students' leisure time reading has declined in recent years (Clark & Rumbold, 2006). Research shows that older students, boys, students in lower educational streams, and students with lower social economic status, read less (Van Schooten, 2005). In a study of low-achieving adolescents, results show that gender differences are also present, and that girls are more intrinsically motivated than boys to read both during school and leisure time (Van Steensel et al., 2019).

Reading enjoyment is one reason that affects whether students do or do not engage in leisure time reading (Boerma, 2016). If a student enjoys reading, he often reads more during leisure time and practices his reading skills more, resulting in better reading performance, which enhances his reading enjoyment. This process of creating a positive reading spiral has been referred to as the process of reciprocal causation or the Matthew effect (Mol & Bus, 2011; Stanovich, 1986).

Not all children take pleasure in reading. International comparisons show that 25% of the fourth graders enjoy reading, whereas 16% of them do not enjoy

reading at all (Mullis et al., 2017). PIRLS-scores for the Netherlands show even more dramatic numbers: only 25% of fourth grade students report enjoying reading, while over 30% report not enjoying reading. Internationally, this ranks the Netherlands as one of the bottom four countries (Gubbels et al., 2017). This is also apparent for 15-year olds; in the past nine years, the amount of time Dutch students spend reading for enjoyment has decreased; they are in last place in these PISA-scores (Gubbels et al., 2017).

Reading attitudes that start out positive decline as children progress through school (Katzir et al., 2009). Tuijl (2015) found reading motivation to be stable in the middle grades of elementary education (grade 3rd, 4th and 5th grade) but declining in 5th and 6th grade. This decline is thought to be related to a shift from 'learning to read' to 'reading to learn' (Chall, 1983; Katzir et al., 2009) since all subjects are taught and learned by reading texts (Katzir et al., 2009). Although this might act as an extra motivation to read, it turns reading into an obligation at the same time.

In line with these findings, efforts to improve children's reading abilities through their reading habits focus on students' reading enjoyment. These efforts form part of policies for reading promotion. In these policies, teachers play a central role. Teachers underscore the importance of students' reading attitudes (Heathington & Alexander, 1984; Quinn & Jadav, 1987). However, teachers do not invest adequate classroom time on reading promotion (Petscher, 2010; Martinez et al., 2008). For instance only one third of students aged 6 to 17 report that they had fixed free reading time in the curriculum (Gambrell, 2015). In line with these findings are the results of Chapter 2, which chart the frequency of use of the different forms of reading promotion behavior in class in 5th and 6th grade. Results show that the averaged frequencies present a large variation over different types of behavior: from daily (e.g., 'giving free reading time in class'), to a few times a year (e.g., 'give free reading time using compulsory books'). In Chapter 2 we conclude that activities reported to be used almost daily, take little or no preparation time. Approaches to reading promotion that require more preparation time and reflect a more scholastic approach, are performed less frequently.

Nevertheless, studies into the effects of reading attitude or motivation indicate that teachers play a serious role in stimulating their students reading attitude or motivation and their reading behavior (De Naeghel et al., 2014a; De Naeghel, 2014b; Gambrell, 1996; Guthrie et al., 2007; Santa et al., 2000).

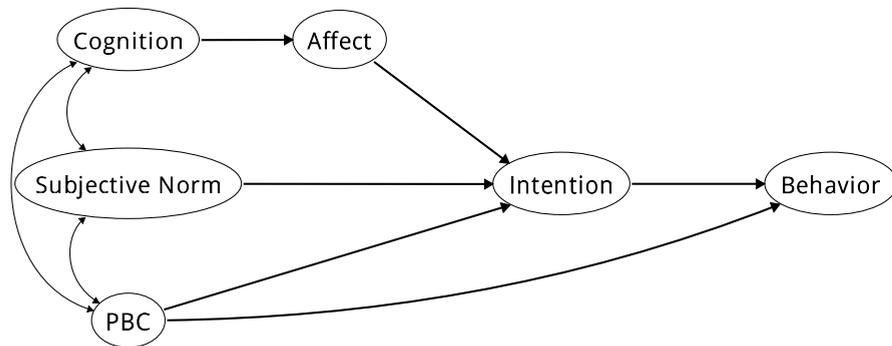
Given the key role teachers can play in motivating their students to read (Gambrell, 1996; Guthrie et al., 2007; Santa et al., 2000), there is a lack of infor-

mation on the factors that determine whether or not teachers perform reading promotion activities (Bonset & Hoogeveen, 2016). Such information is necessary to modify teacher behavior in the desired direction. The present study therefore focusses on the relationship between teachers' perception of their reading promotion of fiction texts and their attitude to performing reading promotion to improve reading behavior, and the reading attitude or motivation of their students. The study utilizes the often-used theoretical model for predicting and explaining behavior: the Model of Planned Behavior (MPB) developed by Fishbein and Ajzen (Ajzen, 1985, 1991; Fishbein, 1975).

The MPB is used for predicting behavior and has been validated in many different fields of social science research (La Barbera & Ajzen, 2020; Norwich & Duncan, 1990; Norwich & Rovoli, 1993; Simonson & Maushak, 1996; Sok et al., 2020; Van den Putte & Hoogstraten, 1997; Van der Pligt & De Vries, 1998). Fishbein and Ajzen (Fishbein & Ajzen, 2010) propose that human behavior that is performed after the person concerned makes a conscious choice, can be predicted from that person's Behavioral Intentions and Perceived Behavioral Control (PBC), and that these Intentions are determined by the person's feelings or attitude (Affect) toward the behavior, his or her Subjective Norm regarding the behavior, and again the Perceived Behavioral Control regarding the behavior (Gold, 2011). In the MPB it is understood that Affect is influenced by the combination of outcomes thought to result from performing the behavior and the evaluation (positive or negative) of these outcomes (Cognitions). The Subjective Norm is seen as the combination of the norms in an individual's environment and his or her motivation to comply with these norms. The Perceived Behavioral Control (PBC) is seen as a combination of the options for performing the behavior, and the ease or difficulty the individual perceives he will have in realizing these options. The MPB is visualized in Figure 1 (Van Schooten, 2005). As stated above, PBC not only influences Behavioral Intentions but also the performance of the behavior itself. The reason for this is that when PBC is low, a person's Intentions may be high but the lack of PBC still prevents the behavior from being performed. For instance, an individual may be highly motivated to stop smoking and at the same time his PBC regarding stopping smoking may be low. In this case, he may intend to stop smoking, but be unable to do so because of a low PBC. This would be reflected in the effect of PBC on the actual performance of the behavior and not on Behavioral Intentions.

Figure 1

The Model of Planned Behavior and its postulated causal structure



As stated above, the MPB is intended for predicting behavior as a conscious choice (Godin et al., 1992). Although one might argue that the curriculum requires teachers to promote reading, the MPB is relevant for this study because performing reading promotion activities involves effort and planning and a teacher can choose whether to make more or less effort to include reading promotion in the daily program. Also, if we want teachers to change their behavior and perform more reading promotion, it takes a conscious choice from teachers.

The variables in Fishbein and Ajzen's model do not account for all variations in behavior (Valois et al., 1988), implying that the MPB can be improved. Triandis (1977) suggests adding the variable 'habit' to the model. However, adding habit would extend the MPB to the prediction of behavior that is not based on conscious choice, and therefore adding habit is less relevant for studies into how to change behavior that follows a conscious choice. Triandis (1977) also suggests a direct effect of the cognitive component on an individual's Intentions, one not mediated by Affect. When the behaviors are thought to be unpleasant to perform, but at the same time perceived as having positive consequences, a direct effect of Cognition on Intention seems more appropriate than an effect of Cognition mediated by Affect. The question whether or not the effect of Cognition is mediated by Affect, is relevant for studies aimed at investigating how best to stimulate conscious behavioral change.

Research Questions

In order to predict teachers' reading promotion behavior, the first question we aim to answer with the current study is whether the Model of Planned Behavior

is an adequate model for predicting teachers' activities aimed at stimulating students to read fiction and if so, which of the two aforementioned models fits best: Cognition loading directly on Intentions (Triandis) or a model in which the effect of Cognition on Intention is mediated through Affect (MPB).

The second research question pertains to the relationships between the constructs in the best fitting model. By identifying the influence that Affect and behavioral, normative, and control beliefs have on the Intention to perform reading promotion behavior focused on reading fiction, and on actually performing the behavior itself, we gather important knowledge about the constructs that would need to be altered to affect a change in Intentions and Behavior (Fishbein & Ajzen, 2010).

The third question we will answer is how positively or negatively 5th and 6th grade teachers in the Netherlands score on the aforementioned MPB constructs. Representative scores on the use of different forms of reading promotion behavior have already been reported in Chapter 2. As we know from PIRLS (Gubbels et al., 2017) students in the Netherlands show a relatively negative attitude towards leisure reading and we also know teachers may influence these attitudes (De Naeghel et al., 2014a). It is therefore interesting to verify how a representative sample of teachers in the Netherlands score on the MPB constructs regarding performing reading promotion activities regarding fiction.

Consequently, we want to establish whether class or teacher characteristics, including behavior, covary with the scores on the MPB constructs (research question 4). For instance, is there a relationship between teaching experience or educational track and the scores on different constructs of the MPB? Do teachers adapt their reading promotional behavior to the needs of the class and therefore perform more reading promotion in classes with students that read less (e.g., older students, students of low social economic status, students in lower educational streams and boys)?

Method

Design

A random cross-sectional sample from all elementary schools in the Netherlands was drawn to answer research question three. In each sampled school, one 5th and one 6th grade teacher was asked to fill out a questionnaire. To answer the other three research questions, the representative school sample was extended with a

non-random sample of 5th and 6th grade elementary school teachers, in order to increase power. These three research questions involve analysis of covariances. Here, we do not need a representative sample, since we want to test theoretical hypotheses and are not aiming to generalize results to a specific population of teachers. To analyze covariances we only need sufficient variation on all relevant variables.

Instrument

Behavior was measured by means of 32 items with 5-point Likert-scales (1=never; 2=a few times a year; 3=monthly; 4=weekly; 5=daily). These 32 items represent 8 different components of reading promotion behavior as identified in an exploratory principal components analysis (Chapter 2). These components are: 1) Introducing texts (e.g. Do you introduce new fiction in class?), 2) Using new media (e.g. Do you use audio books in class?), 3) Using highly ranked media (e.g. Do you use award winning children’s books in class?) , 4) Doing obligatory extracurricular activities (e.g. Do you visit a library with your class?), 5) Facilitating reading (e.g. Do you buy new fiction texts?), 6) Giving student assignments (e.g. Do you let students recite?), 7) Reading obligatory texts at school (e.g. Do you give free reading time with obligatory fiction?) and 8) Using traditional media (e.g. Do you use newspaper articles?).

These components show that reading promotion for fiction and reading promotion for nonfiction, sometimes cluster, implying that teachers do not always distinguish between fiction and nonfiction in their reading promotion behavior.

To measure the other MPB constructs, 50 items were constructed. These items consisted of statements concerning Cognitions, Affect, Subjective Norms, Perceived Behavioral Control and Intentions towards performing the promotion of fiction reading in class (see Table 1). Respondents were asked to indicate on a 5-point Likert response scale (1: “strongly disagree”, 2: “disagree”, 3: “undecided”, 4: “agree” and 5: “strongly agree”) the extent to which they agree with the given statements.

Questions about teachers’ background variables related to their gender, their age (in years), their educational background, the number of years of teaching experience, the grade they teach, whether they work part-time, the number of students in class and the numbers of girls, non-native Dutch speakers and students from low, medium and high socioeconomic status in the school. All items were piloted with two female 5th and 6th grade teachers, one with five and the other with sixteen years elementary school teaching experience. Following this pilot,

some rephrasing was carried out and some extra instruction was added (e.g., how to fill in the questionnaire if you work part-time, the difference between teaching reading comprehension or reading education and reading promotion).

Table 1

Examples of questionnaire items

Likert response scale (1: “strongly disagree”, 2: “disagree”, 3: “undecided”, 4: “agree” and 5: “strongly agree”) and for Intention and Behavior (1=never; 2=a few times a year; 3=monthly; 4=weekly; 5=daily)

Construct	Example
Cognition	By stimulating the reading of fiction texts, school results are stimulated indirectly.
Affect	I like to read fiction texts out loud in class.
Subjective Norm	A reputable teacher needs to talk about classics in literature.
PBC	I have more than enough fiction texts in my classroom for my pupils.
Intention	Are you planning to promote a fiction text this week?
Behavior	Do you introduce new fiction texts to your pupils?

Sample

From the population of 6901 elementary schools in the Netherlands, a representative random sample of 100 elementary schools was drawn. In total 69 schools (69% response rate) participated. Schools were requested to ask one 5th and one 6th grade teacher to complete the questionnaire on how frequently they performed reading promotion activities in class. In some schools, the same teacher taught 5th and 6th grade pupils. In total, 85 5th and 6th grade teachers of the 69 participating schools returned a questionnaire (see Table 2). To answer the third research questions, the data from these 85 teachers are aggregated within schools. For research questions one, two and four, the aforementioned sample was extended with a non-representative sample of 5th and 6th grade teachers, to obtain sufficient power for conducting confirmatory factor analyses. This resulted in an extra 109 questionnaires from 155 different schools (2 missing), adding up to a total of 194 respondents.

To verify the generalizability of the results based on the 69% response in the random sample of elementary schools, some characteristics of the responding schools are compared to the same characteristics of all elementary schools in the Netherlands. Population characteristics of elementary schools made available by the Dutch government were used. The characteristics used are respectively percentages of students in school of low, medium and high social economic status,

the location of schools in different provinces, the type of school¹ and the total number of students in school. To evaluate the generalizability of the school sample, correlations and cross tables with chi-square tests are used.

Table 2

Sample characteristics (due to missing values numbers do not always add up to 100%)

Sample→	Representative sample (n=85)	Extra sample (n=109)	Total (n=194)
Variables ↓			
Gender	Female: 49 (58%) Male: 35 (41%)	Female: 72 (66%) Male: 31 (28%)	Female: 121 (62%) Male: 66 (34%)
Age in yrs.	Mean (s.e.): 44.43 (1.37) s.d.: 12.28	Mean (s.e.): 38.08 (1.36) s.d.: 13.25	Mean (s.e.): 40.98 (.99) s.d.: 13.16
Teaching experience in yrs.	Mean(s.e.):18.36 (1.32) s.d.: 12.10	Mean (s.e.): 13.61 (1.23) s.d.:12.75	Mean (s.e.): 15.70 (.92) s.d.: 12.70
Grade	5 th : 34 (40%) 6 th : 27 (32%) 5 th & 6 th : 24 (28%)	5 th : 36 (33%) 6 th : 35 (32%) 5 th & 6 th : 22 (20%)	5 th : 70 (36%) 6 th : 62 (32%) 5 th & 6 th : 46 (24%)
Educational background	Polytech: 76 (89%) University: 7 (8%)	Polytech 97 (89%) University 8 (7%)	Polytech 173 (89%) University 15 (8%)
Part-time	No: 22 (26%) Yes: 63 (74%)	No: 44 (40%) Yes:62 (57%)	No: 66 (34%) Yes: 125 (64%)

The comparison of schools in the sample (n=69) with all other elementary schools (n=6832) in the Netherlands, showed that the sample of responding schools did not differ significantly from the sample of all other elementary schools in the Netherlands for any of the characteristics compared. Correlations between the percentage of students in school and a dummy variable, indicating whether a school belongs to the sample, were virtually zero for low social economic status ($r = -.017$; $p=.160$; $n= 6901$), medium social economic status ($r = -.003$; $p = .815$; $n=6901$), high social economic status ($r = .014$; $p = .253$; $n=6901$), and school size ($r = .013$; $p= .266$; $n= 6901$). Similarly, the geographical dispersion of schools ($\chi^2=7.696$; $df=5$; $p=.174$; $n=6901$), and the distribution of school type ($\chi^2=1.916$; $df=3$; $p=.590$; $n=6901$) in the sample resembles the population. These results

¹ In the Dutch educational system, besides public schools, there are schools with a religious affiliation (Protestant, Catholic, Muslim etc.) and schools with a specific didactic pedagogical approach (Montessori, Dalton et cetera).

support the representativeness of the school sample. Sample characteristics are shown in Table 2.

Procedure

After receiving permission from school principals, paper versions of the questionnaires were sent out with an introduction letter containing instructions, and a stamped return envelope. Schools that preferred a digital version received an e-mail identical to the introduction letter, and the web address for the questionnaire. The introduction letter or e-mail informed teachers about the purpose and procedure of the research, including the assurance that all information would be reported anonymously. This was to protect teachers' privacy and encourage them to provide frank and honest responses (Alreck & Settle, 1995).

Data Analyses

To answer the first two research questions, confirmatory factor analyses (CFA) were conducted by means of the program Mplus (Muthén & Muthén, 2017). The discriminant validity of the distinctions made in the instrument to measure the different aspects of the MPB toward performing reading promotion activities was inspected by means of the CFAs. Items causing misfit were identified by means of modification indices and residual statistics, and removed from the model. The measurement model and the structural model were fitted simultaneously (Arbuckle, 1995). In this way, the proposed model of the structure of relationships obtained in the set of variables is tested. If a model fits the data, and the relationships in the structural model are as predicted, the construct validity of the instrument is supported. In the CFAs, items are used as indicators of a latent trait, except for the Behavior items. The variables measuring Behavior are eight sums of different types of reading promotion behavior that resulted from an exploratory factor analysis of all behavior items in the questionnaire (Chapter 2). The eight behavior variables are continuous, but the items measuring all other constructs of the MPB are categorical (5-point Likert scales). Therefore, covariance structures are calculated by means of Weighted Least Squares with Means and Variances (WLSMV) and with the specification in Mplus that all variables, except the behavior sums, are categorical.

Model fit is evaluated by means of several fit indices. First, chi-square is used to test exact fit. Because exact fit is a very strict criterion in social science research and chi-square has a very large power in large samples (MacCallum, 1996), we also use the Root Mean Squared Error of Approximation (RMSEA),

the Comparative Fit Index (CFI), and the Tucker-Lewis Index (TLI). RMSEA is an absolute fit-index that indicates how well an a priori model represents the data. CFI and TLI are incremental fit indices showing the relative improvement of fit compared to a nested baseline model with uncorrelated variables. Different criteria for the interpretation of fit indices are mentioned in the literature. CFI and TLI increase in size if fit improves and reach 1 in a perfect fitting model. Values above .90 (Bentler, 1992) or .95 (Hu & Bentler, 1999) indicate of good fit. RMSEA decreases in size when the model fits better. Hu and Bentler (1999) view RMSEA values of smaller than .05 as indicative of 'close' fit, values between .05 and .08 as indicative of 'fair' fit, values between .08 and .10 as indicative of 'mediocre' fit and values greater than .10 as indicative of 'poor' fit.

To verify which structural model of the MPB should be preferred; either the model with a direct path from Cognition to Intentions (Triandis, 1977) or the model with a path from Cognition to Affect (Ajzen, 1991), the difference in fit of both nested models was tested (research question 1). With WLSMV this cannot be done by subtracting both chi-square values to obtain a new chi-square, so for this test, the option DiffTest in Mplus is used. When the difference in fit of nested models is non-significant, the most parsimonious model is chosen. If the loss of degrees of freedom results in a significantly better model fit, the less parsimonious model is preferred.

To answer question two, the standardized regression coefficients of the structural model are evaluated. To check for suppressor effects in the structural model, zero-order correlations between sums of items measuring constructs of the MPB are also checked. Because standardized regression coefficients in the structural model are estimated without error, to facilitate comparison with the coefficients of the structural model, the aforementioned zero-order correlations are also reported after a correction for attenuation².

To answer the third research question, the representative sample (n=69), aggregated over schools, is used. As indications of the attitude towards reading promotion of 5th and 6th grade teachers, item sums representing the MPB constructs are used. By dividing these sums by the number of items, the sums are interpretable on the original Likert scales. For all sums used, the reliability is calculated (Cronbach's alpha) for the representative sample and for the extended sample.

For research at group level (since we only have 1 to 2 teachers per school, the analyses are not carried out multi-level), alpha should be at least .6 (Field, 2009): .7 can be seen as satisfactory and .8 as good (Berthoud & Gershuny, 2000).

To answer the fourth research question, correlations were calculated between the aforementioned sums representing the MPB constructs (range n=170 – 191) and the background variables of teachers and classes.

Results

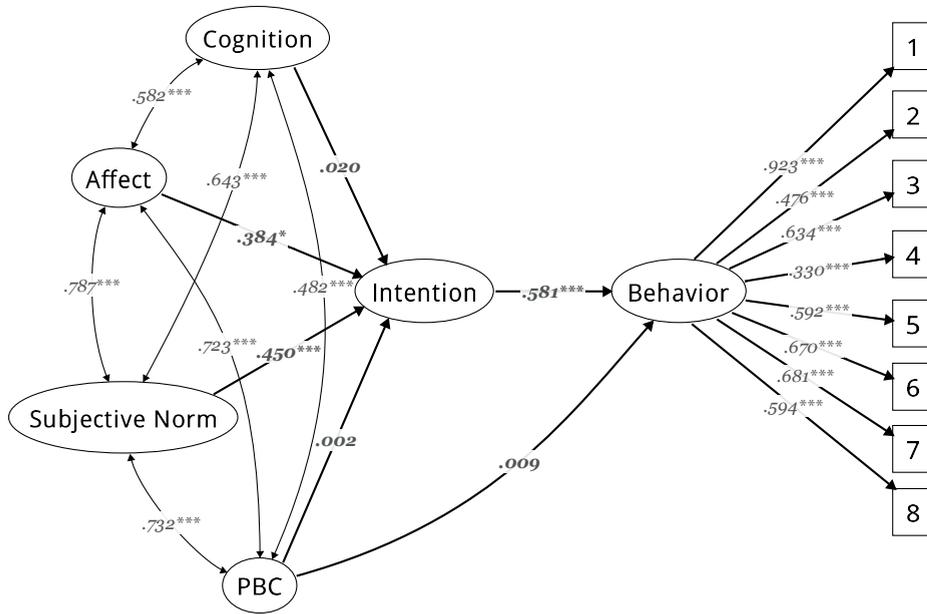
Model fit

The first model fitted is the MPB model as depicted in Figure 1 (Van Schooten, 2005). The model shows an almost fair fit according to RMSEA, but not a good fit according to CFI and TLI (n= 194, $\chi^2 = 2536.708$, df= 1586, p<.000, RMSEA=.06 (fair), CFI=.85, TLI= .84). After removing 24 items with large modification indices, large residual variances or those with non-significant factor loadings, fit improved. Six of 11 Cognition items were removed, five of the 11 Affect items, six of the 10 PBC items, four of the 10 Subjective Norm items and four of the eight items measuring Intention. None of the eight sums indicative of behavior were removed. After removal of the items, the model, Model 1, showed a fair fit (n= 194, $\chi^2 = 755.615$, df= 518, p<.0000, RMSEA =.052, CFI = .91; TLI = .91) and all factor loadings are significant. A model with the same 26 items and 8 behavior sums but with a path of Cognition directly on Intentions, Model 2 (Triandis, 1977), fits even better (n= 194, $\chi^2 = 655.737$, df= 515, p<.0000, RMSEA= .04, CFI= .95, TLI = .95), see Appendix. As Model 1 and model 2 are nested and the difference in fit between the models is significant ($\chi^2 = 53.138$, df=3, p=.000), the conclusion is that the less parsimonious Model 2, with its path from Cognition directly onto Intentions, should be preferred (see Figure 2). Of course removing almost half of the items to obtain a good fit, does raise some concerns. Replication will have to show whether the items removed were truly inferior (e.g. worded poorly), or that we have also capitalized on chance.

² $r_{xy_{new}} = r_{xy_{old}} / (\sqrt{r_{xx} * r_{yy}})$ (Allen & Yen, 1979; p. 63)

Figure 2

Structural path model of teachers' attitude toward reading promotion activities: Relationships between different constructs of the MPB (Model 2)



*= $p < .05$; **= $p < .01$; ***= $p < .001$

Relationships between the constructs in the model

To answer the second research question, the structural model of the best fitting model is inspected (Figure 2). In the structural model (Figure 2), only Subjective Norm and Affect load significantly on Intention (standardized loadings respectively .450 and .384). Subjective Norm is the most important precursor of the Intention to perform reading promotion activities. In the structural model, output evaluations (Cognitions) and control options (PBC) do not show a significant path to the Intentions and the Behavior.

High significant positive correlations are found in the model, between Subjective Norm and PBC (.732), Subjective Norm and Affect (.787), Subjective Norm and Cognition (.643), PBC and Affect (.723), PBC and Cognition (.482), and between Affect and Cognition (.582). This means that teachers scoring high on one of the constructs, generally also tend to score higher on all the other constructs.

In order to detect suppressor effects, the zero-order correlations (both corrected and uncorrected for attenuation) between sums of the items used in the last CFA model fitted, are presented in Table 4. In Table 3 alphas of these sums are presented. All alphas are satisfactory to good, except the alpha for Intention, which is sufficient.

Table 3

Reliability of MPB sums; extended sample (Likert scales for constructs, except behavior¹: “strongly disagree”, 2: “disagree”, 3: “undecided”, 4: “agree” and 5: “strongly agree”, *sd* = standard deviation, *se* = standard error, *n*=number of teachers)

Construct	Alpha	No. Items	M	SD	SE	n
Cognition	.810	6	3.900	.541	.039	192
Affect	.707	6	4.445	.453	.033	193
Subjective Norm	.764	6	4.225	.488	.035	192
PBC	.695	4	3.636	.647	.047	193
Intention	.630	4	4.102	.575	.041	193
Behavior ³	.829	8	2.442	.522	.039	176

*= $p < .05$; **= $p < .01$; ***= $p < .001$

Table 4

Correlations (corrected for attenuation between brackets) between item sums ($n=174-193$)

	Affect	Subj. Norm	PBC	Intention	Behavior
Cognition	.414** (.578)	.501** (.677)	.356** (.494)	.310** (.524)	.265** (.329)
Affect		.502** (.738)	.450** (.680)	.405** (.745)	.190* (.257)
Subj. Norm			.480** (.702)	.491** (.874)	.356** (.466)
PBC				.366** (.670)	.265** (.345)
Intention					.396** (.649)

*= $p < .05$; **= $p < .01$; ***= $p < .001$

Comparing the standardized regression coefficients and correlations from the structural model with the correlations in Table 4, all MPB constructs correlate medium to high. As was seen in the structural model, again the correlations between Intention on the one hand and Subjective Norm and Affect on the other are the highest, but the correlations between Intention and Cognition and PBC

³ Since the mean of Behavior is computed over the 8 different means of items with different answering categories (varying from daily (1) to never (5) and yes/no), a conceptual interpretation of the mean is impossible.

are also substantial. This means that we cannot exclude the possibility that PBC and Cognition have a causal effect on Intentions. The correlation between Affect and behavior is the smallest.

Attitude of teachers

The third question concerns the attitude of 5th and 6th grade teachers in the Netherlands to reading promotion. To ascertain this, means and Cronbach's alphas from the representative sample are presented in Table 5. The alphas show the reliability of sums of items representing each of the latent traits. The alpha of Intention is low, implying that all relationships with the sum of Intention items will be underestimated. Since the value 4 stands for 'agree', we may conclude that on average 5th and 6th grade teachers in the Netherlands have a positive stance towards all aspects of the MPB. They generally believe that reading promotion is beneficial, fun to do, should be done, and is not limited by lack of opportunities and they intend to perform reading promotion in the near future. The construct which measures Affect has the highest mean, indicating that teachers really like to perform reading promotion in class. PBC has the lowest mean of the MPB constructs measured. However, the scores also show there is room for improvement. The percentages of respondents scoring below 'agree' (4) are for Cognition 49%, for Affect 7.2%, for Subjective Norm 22.9%, for PBC 61.4%, and for Intention 35.7%.

Table 5

Means and alphas of MPB sums, aggregated over schools (representative sample). Sample varies from 67 to 69. (1: "strongly disagree", 2: "disagree", 3: "undecided", 4: "agree" and 5: "strongly agree"; and for behavior 1: "never"; 2: "a few times a year"; 3: "monthly"; 4: "weekly"; 5: "daily". SD = standard deviation)

Variable	M (SE)	n	SD	Alpha
Cognition	3.97 (.06)	6	.46	.870
Affect	4.50 (.05)	6	.39	.658
Subjective Norm	4.22 (.05)	6	.43	.703
PBC	3.77 (.07)	4	.57	.665
Intention	4.10 (.06)	4	.46	.449
Behavior	2.5 (.06)	8	.51	.821

Correlates

To answer the fourth research question (What teacher or class characteristics are connected with the different constructs of the MPB?), correlations were calculated between all MPB item sums and background variables of teachers (gender, age, educational background, number of years of teaching experience, grade they teach, whether they work part-time) and class characteristics (the number of students in class and the class percentages and numbers of girls, non-native Dutch speakers and students of low, medium and high social economic status in the school), using the larger non-representative sample. Since there is always one teacher per class and only 1 to 2 teachers per school, a multi-level approach is not needed.

The sum over the 8 different behavior constructs shows significant, but low correlations with both the number and the percentage of girls in class (number $r = .19$, $p = .014$, $n = 172$; percentage $r = .16$, $p = .035$, $n = 171$). We may conclude that whenever there are more girls in class, teachers perform reading promotion slightly more frequently.

Looking at correlations between the other constructs of the MPB and background variables, small but significant correlations were found between the percentage of boys and girls in class and Intention (% boys: $r = -.152$; $p = .039$; $N = 185$; % girls $r = .164$; $p = .024$; $n = 188$). Also, the number of girls in class shows a low but significant correlation with Intention ($r = .143$; $p = .050$; $n = 189$).

Small but significant correlations were found between teacher gender (1=male; 2=female) on the one hand and Subjective Norm ($r = .158$, $p = .031$, $n = 186$) and Intention ($r = .160$; $p = .029$; $n = 187$) on the other, implying that female teachers score higher on Subjective Norm and on Intention.

Finally, small but significant correlations are found between Affect on the one hand and whether the teacher works part time ($r = -.189$; $p = .009$; $n = 190$), whether the teacher teaches in a combined grade 5 and 6 class ($r = .144$, $p = .046$, $n = 191$) and the seniority of the teacher ($r = .154$, $p = .034$, $n = 190$) on the other. Also teaching a combined 5th and 6th grade class shows higher scores for PBC ($r = .153$, $p = .035$, $n = 191$).

Conclusion and discussion

This study set out to analyze whether performing the promotion of reading fiction texts can be predicted by teachers' behavioral, normative and control beliefs. Our study revealed that the Model of Planned Behavior is adequate for predicting teachers' Intentions and behavior with regard to reading promotion. However, the idea of Ajzen and Fishbein, that effects of Cognition on Behavioral Intentions are mediated by Affect, is not confirmed for the domain of reading promotion. Analyses showed that the best-fitting model was one in which Cognition loads directly onto Intentions, supporting the Triandis (1977) version of the MPB. This could be explained by the fact that teaching involves activities which you believe are meaningful for your students, regardless whether you like or dislike performing these activities. The fit of the model also means that performing reading promotion activities is in a way volitional; teachers decide for themselves whether to perform more or less reading promotion and the path of Intention to behavior is significant and substantial.

Furthermore, the results of the model fit show that the intention to perform reading promotion activities is best predicted by the normative attitude (Subjective Norm) the teacher takes towards reading promotion. This means that, above all, 5th and 6th grade teachers perform reading promotion behavior when they believe they should.

In the model, Affect has the second largest loading on Intentions, implying that besides the sense of a moral duty, the amount of enjoyment gleaned from performing reading promotion, also plays an important role in predicting Intentions.

Surprisingly, output evaluations (Cognitions) and control options (PBC) do not show a significant path to Intentions and behavior. This could lead to the construction of a new model tailored to the domain of reading promotion in elementary education. For reading promotion in elementary education, the effect of Cognition might be mediated through Subjective Norm instead of through Affect; since the norms in education are largely determined by what is useful to students for their study and their life outside of school.

In our zero-order correlations we find that all constructs are strongly related to Intentions. This means that in the structural model, the covariances between constructs lead to suppressor effects, particularly for the paths of Cognition to Intentions and of PBC to behavior. Using the structural model to draw conclusions about causal effects should be done with caution.

Additionally, we can conclude that on average Dutch teachers in grades 5 and 6 have a positive stance towards all aspects of the MPB.

It is noticeable that more girls in class leads to teachers performing more reading activities. The fact that girls report to having more pleasure in reading (Gubbels et al., 2017; OECD, 2016), and to reading more in their spare time (Van Schooten, 2005), might make performing reading promotion activities easier for teachers of classes with more girls than boys. Teachers seem to adapt to the already existing tendency of a class and not to the educational needs of the students. If we want boys' reading skills to improve, this approach will not help.

Female teachers are more inclined to perform reading promotion activities and intend to do so more than male teachers. Apparently girls, who generally get more enjoyment from reading and read more than boys, also become teachers who are more inclined to promote reading.

Teachers teaching full time, teaching a combined class and older teachers show a somewhat more positive attitude toward reading promotion.

Limitations and suggestions for future research

The results of our study emphasize the importance of considering different causes for performing reading promotion in order to understand why some teachers stimulate students to read more and thus improve students' reading proficiency. Since Subjective Norm appears to have the strongest relation with Intentions, in order to enhance reading promotion by teachers, it seems useful to stimulate their motivation to comply with the general norm of a professional teacher. Our results can be used when designing a program to stimulate the Intentions to perform reading promotion and the actual reading promotion behavior of teachers, focusing mostly on enhancing Subjective Norm. In order to find out whether these changes in teachers' reading promotional behavior actually lead to the desired behavioral and attitude change of students, more research needs to be done.

One of the problems encountered in this research, was the large proportion of items we had to discard in order to obtain a good model fit. Replication of the research with the items remaining in our model is important for obtaining insights in the replicability of our results. Also, inspection of the discarded items could help to explain why items did not well fit the model. Multicollinearity between MPB constructs presents another problem, as we have explained in the above. Experimental studies aimed at verifying the effects of stimulating teachers' Affect, Subjective Norms or Cognition on the performance of reading promotion in class, could shed light on these questions.

Implications for educational practice

Results show that, on average, teachers have a rather positive stance towards reading promotion. However, proportions of teachers scoring generally below 'agree' on the statements in the questionnaire, are still substantial. When translating the results into advice for encouraging teachers to promote reading, convincing teachers of the moral imperative to promote reading seems the most promising. Also attempting to find ways to increase how much teachers like performing reading promotion in class seems promising. This knowledge should be integrated into educational teacher training programs.

In addition, more attention can be directed to convincing teachers that reading promotion is most appropriate in classes where students read less, i.e. in classes with more boys than girls. Our results show that, on average, teachers are slightly less inclined to perform reading promotion in classes that need it the most.

Appendix A

Comparing two models of teachers' attitude toward reading promotion of fiction texts.

Table 1

CFA and difftest outcomes of Model 1 (MPB) and Model 2 (Triandis)

	χ^2/df	p	RMSEA/CFI/TLI
Model 1	$\chi^2 = 755.615$ df = 518	p = .0000	RMSEA .05 (fair fit) CFI = .91 TLI = .91
Model 2	$\chi^2 = 655.737$ df = 515	p = .0000	RMSEA .04 (close fit) CFI = .95 TLI = .95
Difftest	$\chi^2 = 53.138$ df = 3	p = .000	

Teachers'
attitudes
toward
fiction and
nonfiction
reading
promotion



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Abstract

The purpose of this study was to find out whether or not the Model of Planned Behavior (MPB) when used to predict the performance of reading promotion by 5th and 6th grade elementary school teachers should differentiate between two separate sets of constructs: one for the promotion of the reading of fiction and one for the reading of nonfiction text in class. Also, it verified the extent to which different MPB constructs of teachers predict the amount of reading promotion activities they perform.

Data were gathered in a survey administered to 194 teachers and analyzed using confirmatory analysis (CFA).

Results indicate that the MPB model regarding teachers' reading promotion behavior should distinguish two separate sets of constructs for the promotion of reading, one for fiction and one for nonfiction text. The effect of the cognitive belief regarding the usefulness of promoting nonfiction reading on the Intentions to promote nonfiction reading, appears not to be mediated by Affect, as the original MPB suggests. Furthermore, both for fiction and nonfiction, the Affect constructs have the strongest standardized path on Intention, followed by Subjective Norm. Cognition and Perceived Behavioral Control for both fiction and nonfiction do not have a significant path on their respective Intention constructs.

Introduction

Professional organizations recommend that teachers include a variety of text genres when they promote their students' reading enjoyment and leisure time reading (Santa, et al., 2000; Reutzel & Gali, 1998). However, in elementary education teachers appear to have a preference for the use of fiction texts, while largely neglecting nonfiction (Barone & Morrow, 2003; Chapman et al., 2007; Duke, 2000, 2003, 2004; Duke & Bennett-Armistead, 2003; Moss & Hendershot, 2002; Saul & Dieckman, 2005; Yopp & Yopp, 2006). Yet, reading nonfiction texts has several advantages for students. Firstly, by passing on factual information, it can involve them in the real world (Duke & Bennett-Armistead, 2003; Moss, 2005; Moss & Hendershot, 2002; Ness, 2011; Yopp & Yopp, 2006; Young et al., 2007). Connecting to real-life experiences motivates children, also those who struggle with reading (Dreher, 2003; Duke, 2003; Smith & Wilhelm, 2008). Secondly, nonfiction text often contains technical or content-specific vocabulary (Moss, 2005). Also, clear text structures are common in nonfiction, e.g. problem-solution, cause and effect, and also graphical additions such as maps or charts (Duke, 2000; Duke & Kays, 1998; Pappas, 2006).

Research has shown that, despite the advantages of reading nonfiction texts in their spare time, elementary school students do not read a lot of nonfiction texts and do not always receive clear instruction on how to read such texts (Barone & Morrow, 2003; Chapman et al., 2007; Duke, 2000, 2003, 2004; Duke & Bennett-Armistead, 2003; Moss & Hendershot, 2002; Saul & Dieckman, 2005; Yopp & Yopp, 2006). This is noteworthy, given that from 3rd grade onwards students' curriculum includes subjects like geography, history and biology.

Chapter 2 describes the use of different forms of reading promotion behavior. This study shows that teachers focus mainly on promoting the reading of fiction texts, which corresponds to the findings reported in several other studies and policy papers (e.g. Stichting Lezen, 2012; Van Schooten, 1997). However, in Chapter 2 we also found in a principal components analysis that activities of teachers regarding the promotion of reading fiction and nonfiction sometimes cluster in the same components, suggesting that teachers do not always differentiate between fiction and nonfiction when promoting student reading.

If teachers are required to help students read nonfiction texts, and if students' leisure time reading behavior, interest and engagement determines overall reading success (Guthrie et al., 2000), it is helpful to identify the extent to which teachers encourage their students to read fiction and nonfiction texts, and to

detect what influences them to promote reading of both fiction and nonfiction texts. An interesting question is therefore whether teachers make a distinction between the promotion of reading fiction and nonfiction. If teachers do make this distinction, we can encourage a more balanced approach to reading promotion, targeting fiction and nonfiction separately and avoiding a too general approach towards reading promotion.

When we look at the attitude of teachers toward promoting the reading of fiction for their students (cf. Chapter 3), we see that the intention to perform reading promotion activities is best predicted by the normative position a teacher takes towards the promotion of reading fiction texts, implying that the amount of reading promotion aimed at fiction is dependent mainly on whether teachers feel a moral duty to do so. Also, the amount of enjoyment teachers experience while performing reading promotion with students plays an important role (cf. Chapter 3).

The question is whether this is different for nonfiction. This study therefore investigates how teachers encourage their students to read, not only fiction texts, but also nonfiction. In the present study we are also interested in different factors that impact teachers' reading promotion activities, aimed at both fiction texts and nonfiction texts. Once these factors, and the relationship of these factors, with both forms of reading promotion behavior are known, recommendations on how to stimulate teachers to perform more reading promotion activities can be formulated, for both nonfiction and fiction texts, and in doing so, stimulate students to read more and more widely and thus improve their reading proficiency.

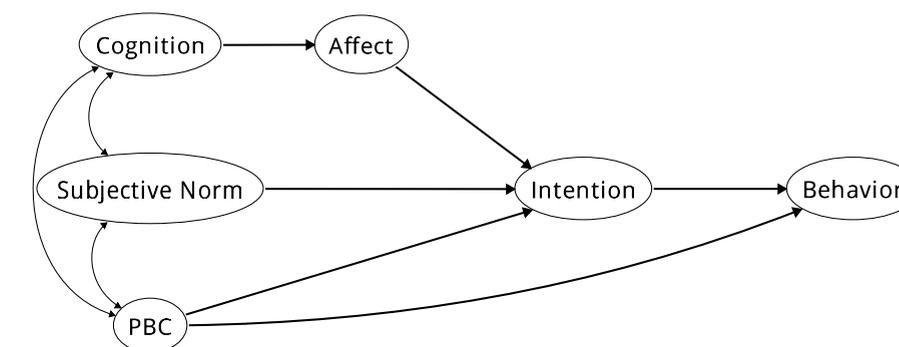
The focus in the present study is on 5th and 6th grade, since PIRLS-results show a decline in reading motivation internationally from 4th grade on (Meelissen et al., 2012). In 4th grade, texts become generally more complex (Chall, 1983; Tuijl, 2015). Also, the reading curriculum in 4th grade gradually shifts from decoding to reading comprehension skills. This might partly explain why children in the upper grades of elementary education in the Netherlands read less and less. One way to counter this negative trend might be reading promotion in school. It seems reasonable to hypothesize that teachers who apply reading promotion activities with their students more frequently, will be more effective in encouraging students to read (Burgess et al., 2011). We also surmise that only promoting fiction reading is not the optimal way to make students read more in their spare time.

Teachers' attitudes and behaviors are studied from the perspective of contemporary attitude theory. The leading theoretical model for predicting and explaining behavior is the Model of Planned Behavior (MPB) developed by Fishbein and

Ajzen (Ajzen, 1988, 1991; Fishbein, 1975). In the MPB, several constructs are believed to explain why individuals choose to perform certain forms of behavior, see Figure 1. In the model, Cognition represents the expected consequences of the behavior and whether these consequences are viewed as positive or not. Affect represents the extent to which a person likes or dislikes performing the behavior. The Subjective Norm is the degree to which a person feels morally obliged to perform the behavior. The Perceived Behavioral Control (PBC) is defined as the ease or difficulty a person experiences in realizing the options he or she sees for performing the behavior. Intentions are the degree to which a person intends to perform the behavior in the near future and behavior stands for the duration and frequency with which a person performs the behavior. The one-sided arrows represent hypothesized causal relationships, two-sided arrows represent covariances.

Figure 1

The Model of Planned Behavior and its postulated causal structure



In the MPB as shown in Figure 1, behavior is believed to be influenced by both Intentions and Perceived Behavioral Control (PBC). The influence of PBC on behavior is motivated by the idea that a person might have a strong intention for performing specific behavior, but at the same time might perceive the likelihood of being able to perform that behavior to be very low. Then Intentions are thought to be influenced by Affect, Subjective Norm and Perceived Behavioral Control; Affect is thought to be influenced by Cognition. This means that in the Ajzen and Fishbein model, the effect of Cognition on Intentions is thought to be mediated by Affect. An alternative version of the MPB is proposed by Triandis (1977). In the Triandis-model, the Cognitive component directly influences an individual's

Intentions (Triandis, 1977). This implies that in Triandis' version of the model, the evaluation of the outcome of specific behavior does not cause an individual to either like or dislike performing the behavior. In Triandis' version of the model, an individual can intend to perform behavior because it is thought to be useful, while disliking performing the behavior. If we want to know how to stimulate teachers to promote their students' reading, it is important to know what influences what.

In Chapter 3, we showed that for teachers in elementary education, the Triandis version of the MPB fits significantly better for the promotion of the reading of fiction text, than the version proposed by Ajzen and Fishbein.

Research Questions

The first question we aim to answer with the current study is whether the MPB is an adequate model for predicting teachers' behavior regarding encouraging their students to read nonfiction texts in their spare time and if so, which of the two aforementioned models fits best: Cognition loading directly on Intentions (Triandis, 1977) or the effect of Cognition on Intentions mediated through Affect (Ajzen, 1991). The second research question is whether the respective constructs of the MPB when used to predict grade 5 and 6 teachers' reading promotion behavior should differentiate between the reading of fiction and nonfiction texts, or whether these constructs are independent of the type of reading material. Plus, where differentiation of MPB constructs is needed, it is interesting to interpret the strengths of the relationships between the different components in the model separately for fiction and nonfiction text (research question three). Once we know the strengths of the relationships between different components, we can make suggestions on how to stimulate elementary school teachers to promote the reading of fiction and nonfiction texts in class.

Lastly, when the results show that differentiation is needed, we want to answer the question how favorably teachers score on each of the constructs and whether for each aspect of the model (Cognition, Affect etc.) teacher scores differ depending on whether the constructs pertain to the promotion of fiction or of nonfiction (research question four).

Method

Design

To answer the research questions, a questionnaire was distributed among a cross-sectional sample consisting of one 5th and one 6th grade teacher from a convenience sample of 157 elementary schools in the Netherlands.

Instrument

To measure the MPB constructs, except behavior, 89 items were constructed (50 for fiction and 39 for nonfiction). These items consisted of statements regarding Cognition, Affect, Subjective Norm, Perceived Behavioral Control and Intention towards performing the reading promotion of fiction texts and nonfiction texts (see Table 1). Respondents were asked to indicate on a 5-point Likert-scale (1: "strongly disagree", 2: "disagree", 3: "undecided", 4: "agree" and 5: "strongly agree") the extent to which they agree with a given statement.

Table 1

*Examples of questionnaire items: fiction/nonfiction
Likert response scale (1: "strongly disagree", 2: "disagree", 3: "undecided", 4: "agree" and 5: "strongly agree") and for Intention and behavior (1=never; 2=a few times a year; 3=monthly; 4=weekly; 5=daily)*

Construct	Example
Cognition	By stimulating reading fiction texts, school results are stimulated indirectly. By stimulating reading nonfiction texts, you stimulate students' general knowledge.
Affect	I like to read fiction texts out loud in class. I like to read newspaper articles out loud in class.
Subjective Norm	A decent teacher needs to talk about classics in literature. A decent teacher should introduce different kinds of nonfiction texts.
PBC	I have more than enough fiction texts in my classroom for my students. I know where to find interesting articles for my students.
Intention	Are you planning to announce a fiction text this week? Are you planning to let students read nonfiction texts this week?
Behavior	Do you introduce new fiction texts to your students? Do you introduce nonfiction texts to your students?

Behavior is measured by means of 32 items with 5-point Likert-scales (1=never; 2=a few times a year; 3=monthly; 4=weekly; 5=daily). These 32 items represent 8 different components of reading promotion behavior as detected in Chapter 2 by means of a principal components analysis (PCA). In this PCA fiction and

nonfiction items appeared to load on the same components. Therefore, most of these eight components contain both fiction and nonfiction items. These components are 1) Introduction of texts, 2) New media, 3) Highly ranked media, 4) Obligatory activities outside school, 5) Enabling reading, 6) Giving student assignments, 7) Obligatory reading inside school and 8) Traditional media.

All items were piloted with two female 5th and 6th grade teachers, one with five and the other with sixteen years elementary school teaching experience. Based on this pilot some rephrasing was done and some extra instruction was added (e.g., how to fill in the questionnaire if you work part-time, the difference between teaching reading comprehension or reading education and reading promotion).

Sample

The convenience sample consisted of 66 males (34%) and 121 females (62%) (7 respondents did not list their gender), resulting in a total of 194 completed questionnaires with usable responses. The sample consists of 36% 5th grade teachers, 32% 6th grade teachers and 24% teachers teaching both 5th and 6th grade. The sample included beginning and experienced teachers, the mean years of teaching experience for the entire group was 15.7 years with a standard deviation of 12.7 years. The average age of the respondents was 41.0 years with a standard deviation of 13.2 years. Some worked part-time (64%) or shared their work in 5th or 6th grade with a colleague. 89% teachers were trained at a polytechnic, 8% were university-trained teachers.

Data Analyses

The first two research questions are answered by means of confirmative factor analyses (CFA) using the program Mplus (Muthén & Muthén, 2017). To verify model fit, we use chi-square to evaluate exact fit. Since chi-square is very sensitive to sample size, and exact fit is a strict criterion for the social sciences, we also use RMSEA, CFI and TLI (MacCallum, 1996). CFI and TLI should exceed .90 (Bentler, 1992) or .95 (Hu & Bentler, 1999) to indicate good fit. Values of RMSEA below .05 indicate close fit, values between .05 and .08 indicate fair fit, values between .08 and .10 indicate mediocre fit and values above .10 misfit (MacCallum, 1996). Models are fitted with WLSMV (Weighted Least Square Mean and Variance Adjusted Estimators) since item scores are based on Likert- scales and thus categorical. Model fits for the first two research questions were established on all MPB constructs except behavior. The reason for this is that the behavior constructs do not separate clearly between reading promotion for fiction and nonfiction (Chapter 2).

To answer the first research question, for each construct in the MPB, except behavior, a latent trait is stipulated in the model. Each latent trait loads on each of the items supposed to measure the trait. The structural part of the first model fitted for answering research question one follows the original MPB (Ajzen, 1991) (see Figure 1). Through inspection of modification indices, residual variances and significance of factor loadings, items causing misfit are removed.

Once a good fit is established, we verify whether the structural part of the model should be based on Triandis' version of the model or on the original MPB. To do this, a second model is fitted (Triandis, 1977) with in the structural part of the model Cognition loading directly on Intentions (not mediated through Affect). Since both models are nested, the difference in fit of these two models can be tested. This test is done by means of the option DiffTest in MLwiN since, when using WLSMV, one cannot take the difference in chi squares of two nested models to obtain a new chi square for testing fit difference of these models. By testing the fit difference, we can decide which structural model for predicting the behavior regarding the reading promotion of nonfiction texts should be preferred: the original MPB or the Triandis version. When the fit difference is not significant, we choose the most parsimonious model (original MPB). If the loss in degrees of freedom results in a significantly better fit, the Triandis version of the model is preferred. Also, to answer the second research question, i.e. whether a model for predicting reading promotion should separate each construct for fiction and nonfiction, two nested models are compared, one with separate factors for fiction and nonfiction for each of the constructs (e.g., Cognition fiction/ Cognition non-fiction) and one with these factors combined. Again, this is done with the DiffTest option. For the fiction part of this model, we start with the model reported in Chapter 3. In this model, in order to obtain a good fit, 24 of the 50 original items were removed based on modification indices and residual variances.

Once we establish the best fitting structural model (original MPB or Triandis' version) and whether the constructs for fiction and nonfiction should be separated or not, the model is fitted again after adding the eight sums over the items of each of the behavior constructs as indicators of behavior. Inspection of the structural part of this model is used to answer the third research question. To be able to detect suppressor effects, the zero-order correlations between sums of the items used in the best fitting model, are also checked. To facilitate comparison with correlations and loadings in the structural model, which are estimated after removing error variance, zero order correlations are also reported after correction for attenuation ($r_{xy_{new}} = r_{xy_{old}} / (\sqrt{r_{xx} * r_{yy}})$): Allen & Yen, 1979; p. 63).

To verify the reliability of these sums, which are used in subsequent analyses mentioned below, Cronbach's alpha is calculated for each sum.

Then the means on each of the constructs in the model are evaluated. Each mean is based on a sum of items belonging to one construct and then divided by the number of items summed. This way we can interpret the means on the original Likert-scales. Also, whether construct means differ significantly by means of paired t-tests, is tested. To be able to compare scores for fiction and nonfiction constructs, the items for fiction and nonfiction were mirrored as much as possible, but not perfectly, in the construction of the questionnaire. Also, due to the omission of items based on the modification indices in the CFAs, the numbers of items in the MBP constructs for fiction and nonfiction are not always alike. Therefore, we must be cautious when interpreting differences in means for fiction and nonfiction constructs.

Results

Model fit

After removing two items having large modification indices, the MPB model for nonfiction with the remaining 37 items shows a fair fit ($n=172$, $\chi^2=1106.208$, $df=553$, $p<.000$, $RMSEA=.08$ (fair), $CFI=.88$, $TLI=.86$). Then, with the same items as indicators of the constructs the Triandis model was fitted ($n=172$, $\chi^2=993.171$, $df=550$, $p<.000$, $RMSEA=.07$ (fair), $CFI=.89$, $TLI=.88$), also showing a fair fit and a significantly better fit than that of the MPB ($\chi^2=68.887$, $df=3$, $p=.000$). Therefore, as with the MPB model for fiction (see Chapter 3), the less parsimonious model with a path from Cognition directly onto Intention also fits best for nonfiction: again, Cognition is not mediated through Affect. This answers the first research question.

The second research question as to whether there are two different sets of MPB constructs, one for fiction and one for nonfiction, is again answered by comparing the model fits of two nested models. The fiction part of this model stems from the analyses reported in Chapter 3. To obtain a good model fit, 26 of the 50 original items were removed after inspection of the residual variances and the modification indices. As stated in Chapter 3, removing almost half of the items to obtain a good fit, does raise some concerns. Replication will have to show whether the items removed were truly inferior (e.g. bad wording), or that we have also capitalized on chance. The results of the analyses show that a model

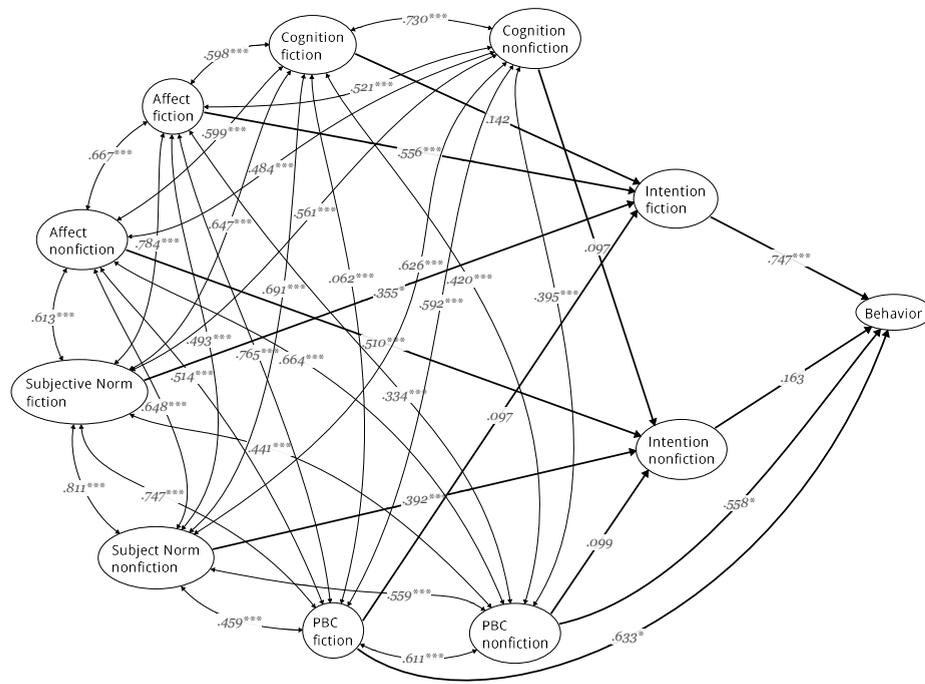
with separate factors for fiction and nonfiction (behavior not included) shows a close fit ($n=172$, $\chi^2=2382.661$, $df=1732$, $p<.000$, $RMSEA=.05$, $CFI=.90$, $TLI=.89$). A model with combined factors shows a fair fit ($n=172$, $\chi^2=2653.187$, $df=1759$, $p<.000$, $RMSEA=.05$, $CFI=.86$, $TLI=.86$). Testing the difference in fit between these nested models indicates that the model with 10 separate factors, five for fiction and five for nonfiction, shows a significantly better fit ($\chi^2=273.754$, $df=27$, $p=.000$) than the model with only 5 factors (each construct indicated by both fiction and nonfiction items). The conclusion is therefore that the less parsimonious model should be preferred: this means for all constructs of the MPB for predicting the reading promotion of teachers, we should distinguish between the reading promotion of fiction and of nonfiction texts. In teachers' minds, reading promotion of fiction is not identical to reading promotion of nonfiction; they make a distinction between the two in all of the constructs included in the MPB, except behavior. The constructs regarding reading promotion behavior appeared not to show a clear distinction between behavior aimed at promoting fiction and at nonfiction. This outcome corresponds with the results reported in Chapter 2.

To answer the third research question concerning the strengths of the relationships between the different constructs, a model with separate factors for fiction and nonfiction was fitted with the combined behavior constructs added to the model (see Figure 2). The standardized regression weights that were obtained through the confirmatory factor analysis are presented in Figure 2. This model shows a close fit according to RMSEA and an almost fair fit according to TLI and CFI ($n=172$, $\chi^2=2943.525$, $df=2237$, $p<.000$, $RMSEA=.043$, $CFI=.89$, $TLI=.88$).

In Figure 2, the most noticeable difference between the fiction and the nonfiction part of the structural model is found in both paths from Intention to behavior. For fiction, this path is significant and very large; for nonfiction the path is small and non-significant. The other paths for fiction and for nonfiction are very similar in terms of order of magnitude. For both fiction and nonfiction, Affect has the strongest standardized path on both Intention constructs (for fiction .556, and for nonfiction .510), followed by Norm (fiction .355, nonfiction .392). Cognition and PBC for both fiction and nonfiction do not have a significant path on both Intention constructs. In short, teachers undertake actions when they see the fun of it and when they experience a moral obligation. The latter matches their responsibility as a teacher.

Figure 2

MPB model for predicting teachers' acting out reading promotion of fiction and nonfiction texts



*= $p < .05$; **= $p < .01$; ***= $p < .001$

Whether or not they believe it to be useful (Cognition) or possible (PBC) does not matter for the Intention. A noticeable result is that both PBC-constructs do significantly and strongly predict behavior directly (.633 for fiction and .558 for nonfiction).

Lastly, we see that all correlations between MPB constructs (the double arrows) are high to very high. For instance, the correlation between Cognition fiction and Norm fiction is .647. In other words, teachers who think performing reading promotion is useful for students also more often perceive a moral obligation to promote reading. In short, on average teachers who score high on one of the MPB constructs for fiction or nonfiction, on average also score high on all other MPB constructs fiction and nonfiction alike, which means that there are teachers who promote all reading (fictional and nonfictional) and score higher on all MPB constructs (for fiction and nonfiction) and there are those who do (much) less.

To be able to detect suppressor effects, the zero-order correlations between the sums of the items used in the last model fitted were computed and are presented in Table 2 (Table 3 shows the reliability of the sum scores). Zero order correlations are reported both with and without correction for attenuation, to facilitate comparison with the loadings and correlations found in the structural model, since these are also computed after removing residual variance.

Inspection of the zero order correlations in this study, which are significant and positive, shows that in the Triandis version, three paths (from Cognition nonfiction on Intention nonfiction, PBC fiction on Intention fiction and PBC nonfiction on Intention nonfiction) are almost zero and nonsignificant. However, the zero order correlations between aforementioned constructs are significant and of medium to high size (respectively .345**, .366**, .457**, and .407, .553 and .651) respectively, after correction for attenuation. Clearly, multicollinearity presents a problem in interpreting the structural model.

Table 2*Zero-order correlations (corrected for attenuation between brackets) between item sums (n=187-192)*

	Cognition fiction	Affect fiction	Subjective Norm fiction	PBC fiction	Intention fiction		Cognition nonfiction	Affect nonfiction	Subjective Norm nonfiction	PBC nonfiction	Intention nonfiction
Affect fiction	.414*** (.757)										
Subjective Norm fiction	.501** (.637)	.502** (.683)									
PBC fiction	.356** (.474)	.450** (.642)	.480** (.659)								
Intention fiction	.310** (.434)	.405** (.607)	.491** (.708)	.366** (.553)							
Cognition nonfiction	.571** (.723)	.421** (.571)	.498** (.649)	.351** (.480)	.305** (.438)						
Affect nonfiction	.473** (.656)	.422** (.626)	.424** (.605)	.361** (.540)	.359** (.564)	.413** (.587)					
Subjective Norm nonfiction	.566** (.687)	.365** (.474)	.606** (.758)	.286** (.375)	.316** (.435)	.530** (.660)	.489** (.667)				
PBC nonfiction	.373** (.494)	.213** (.302)	.286** (.390)	.421** (.602)	.235** (.353)	.355** (.482)	.434** (.646)	.452** (.589)			
Intention nonfiction	.357** (.474)	.353** (.502)	.388** (.531)	.249** (.357)	.394** (.594)	.345** (.407)	.418** (.624)	.538** (.703)	.457** (.651)		
Behavior	.252** (.308)	.205** (.268)	.363** (.456)	.272** (.358)	.390** (.540)	.129 (.161)	.355** (.487)	.315** (.378)	.347** (.454)	.343** (.451)	

* = $p < .05$; ** = $p < .01$; *** = $p < .001$

To answer the fourth and last research question, differences between means of MPB constructs relating respectively to fiction or nonfiction for the same aspect are tested (e.g., nonfiction Cognition versus fiction Cognition). In Table 3, the mean scores and standard deviations for each of the constructs are given. All means are converted to the original Likert-scale, so that scores can be interpreted on these scales running from 1 (I totally disagree) to 5 (I totally agree). Thus, a score of 3 represents a neutral stance. The number of items per factor and the homogeneities (Cronbach's alpha) are also given.

Table 3

Reliability of MPB sums

Construct	Cronbach's alpha	No. items	M	SD	SE	n
Cognition fiction	.810	6	3.900	.544	.039	188
Cognition nonfiction	.770	7	4.223	.454	.033	188
Affect fiction	.707	6	4.449	.455	.033	189
Affect nonfiction	.642	8	3.913	.431	.031	189
Subjective Norm fiction	.764	6	4.225	.488	.035	192
Subjective Norm nonfiction	.837	7	3.958	.534	.039	192
PBC fiction	.695	4	3.653	.642	.047	189
PBC nonfiction	.704	7	3.594	.521	.038	189
Intention fiction	.630	4	4.098	.579	.042	187
Intention nonfiction	.699	6	3.923	.568	.042	187

The reliability of the MPB subscales is fairly good, especially if we consider the low number of items per subscale. One sample t-tests show (see Table 4) that all means of MPB sum scores differ significantly from a mean of three (for all 10 means $p < .000$), implying that all average scores indicate a positive stance towards reading promotion. However, when we look at the standard deviations, we conclude that substantial proportions of teachers do not agree with the statements in the questionnaire. Furthermore, paired t-tests show that the positive consequences (Cognition) are considered larger for reading promotion of nonfiction than of fiction (mean difference = $-.324$, $t = -9.455$, $df = 187$, $p = .000$). On the other hand, teachers like (Affect) to promote reading of fiction texts more than nonfiction texts (mean difference = $.536$, $t = 15.444$, $df = 188$, $p = .000$). The Perceived Behavioral Control means do not differ significantly for fiction and nonfiction (mean difference = $.059$, $t = 1.286$, $df = 188$, $p = .200$). The Subjective Norm and Intention are both significantly higher for fiction than nonfiction (Subjective Norm mean difference = $.267$, $t = 8.128$, $df = 191$, $p = .000$; Intention

mean difference = $.174$, $t = 3.773$, $df = 186$, $p = .000$). Table 4 shows the effect sizes of the aforementioned differences.

Table 4

Effect sizes paired t-tests of differences between MPB constructs for fiction and nonfiction

Construct	t	df	p	d	r
Cognition	-9.455	187	.000	-1.383	.569
Affect	15.444	188	.000	2.252	.748
PBC	1.286	188	.200		
Subjective Norm	8.128	191	.000	1.176	.507
Intentions	3.773	186	.000	0.553	.267

(Cohen's $d = 2t / \sqrt{df}$ and $r_{yt} = \sqrt{t^2 / (t^2 + df)}$)

Conclusion and discussion

Our study set out, above all, to determine whether acting out reading promotion activities should be distinguished into two separate sets of constructs, one for the promotion reading fiction and one for reading nonfiction texts in class. We also verified the extent to which MPB constructs of teachers predict the amount of reading promotion activities teachers perform in class and whether teachers experience reading promotion for fiction as different from reading promotion for nonfiction.

Firstly, the best fitting model of the MPB constructs for the promotion of reading of nonfiction texts by teachers, appears to have the same structure as we have seen for the promotion of reading fiction (see Chapter 3). For reading promotion of both fiction and nonfiction, the best-fitting model is one in which Cognition has a direct path onto Intentions, following Triandis (1977). This means that also for the reading promotion of nonfiction texts, the effect of the usefulness (Cognition) of promoting nonfiction reading on the Intentions to promote nonfiction reading, is not mediated by Affect. Also, this means that for the reading promotion of both fiction and nonfiction texts, the same model fits best and that in this model both Cognition and Affect separately influence Intentions.

We also discovered that, except for behavior, for teachers in elementary education, promoting the reading of fiction and nonfiction involves separate sets of

constructs. This means, for instance, that teachers who like to promote the reading of fiction do not necessarily equally like promoting the reading of nonfiction. Both for fiction and nonfiction, Affect constructs have the strongest standardized path on Intention, followed by Subjective Norm. Cognition and PBC for both fiction and nonfiction do not have a significant path on both Intention constructs. In short, this means that, for both fiction and nonfiction, teachers intend to perform more reading promotion when they like doing it and when they believe it is their moral duty, and that the perceived usefulness and ease of promoting reading does not influence the intention to do so in the near future. A noticeable result is that, for both fiction and nonfiction, the perceived ease or difficulty of performing reading promotion (PBC) does not significantly predict the Intentions, but does significantly and strongly predict actual behavior. In other words, teachers are affected by whether they experience the ability to perform reading promotion, but this does not seem to influence their Intentions to do so. One conclusion is that teachers often do intend to promote reading but fail to achieve this intended behavior because they are deterred by a perceived lack of behavioral control.

The most significant difference between the fiction and the nonfiction part of the model is found in both paths from Intention to behavior. The means for the Intention to perform reading promotion are almost equal with regards to fiction and nonfiction (see Table 3 above). However, the Intention regarding nonfiction does not seem to influence behavior. For fiction, the path is significant and very large; for nonfiction, the path is small and non-significant. There are several possible explanations for this difference in paths. One explanation might be that promoting nonfiction texts is not part of the standard repertoire. Informational texts for voluntary reading are often scarce in elementary school (Ness, 2011). Also, many elementary school teachers believe that the complexity of informational texts, especially when it comes to vocabulary, can be a barrier (Ness, 2011). However, the question remains whether or not some students would prefer to read about Formula 1 racing cars for example, rather than fiction.

Another difference between fiction and nonfiction relates to the mean scores for the MPB constructs of teachers. If we compare the same aspects of the model for fiction and nonfiction (Cognition fiction/Cognition nonfiction), we see that for Affect, Subjective Norm and Intention, the means for fiction are higher. However, for Cognition the mean for nonfiction is higher. There are a few possible explanations. First, the differences could stem partly from the use of different items for constructs related to fiction and nonfiction. Another explanation

could be that teachers believe that reading nonfiction may be more beneficial (Cognition) but promoting nonfiction is not their responsibility since nonfiction is also presented in other subjects (e.g. Geography, History). Also, teachers may think promoting fiction is an essential as part of cultural education and that promoting fiction has become a habit.

Limitations and suggestions for future research

One of the problems encountered in this research is the large proportion of items that had to be discarded to obtain a good model fit. Replication of the research with the items remaining in our model is important for gaining insights into the replicability of our results. Also, inspection of the discarded items could help to explain why items did not well fit the model.

One problem in interpreting the paths from different constructs on behavior in the structural model is that we use eight different variables to measure behavior. These eight variables are based on an exploratory factor analyses of behavior items that were constructed after interviewing teachers, and after the inspection of educational textbooks (Principal Components Analysis, see Chapter 2). The result is, that items used are not separated on whether they are fiction and nonfiction components, but on other characteristics (e.g., new media, the introduction of both fiction and nonfiction texts in class). So, in the exploratory factor analyses, fiction and nonfiction behavior items appeared to load on the same components. Therefore, most of these eight variables contain both fiction and nonfiction items. Possibly, a strictly separate operationalization of fiction and nonfiction promotion behavior, would lead to different results.

Another suggestion for future research therefore relates to the improvement of the measurement of the behavioral aspects of teachers' reading promotion. Since the questionnaire reflected behavior as found in practice (Chapter 2), the line between fiction and nonfiction items was a rather thin one. Also, because teachers did not have the chance to react on the questionnaire, their interpretations of the meaning of items could not be verified. It is possible that teachers implicitly read items as being indicative of behavior relating to promoting fiction, even when items did not explicitly state they related to fiction.

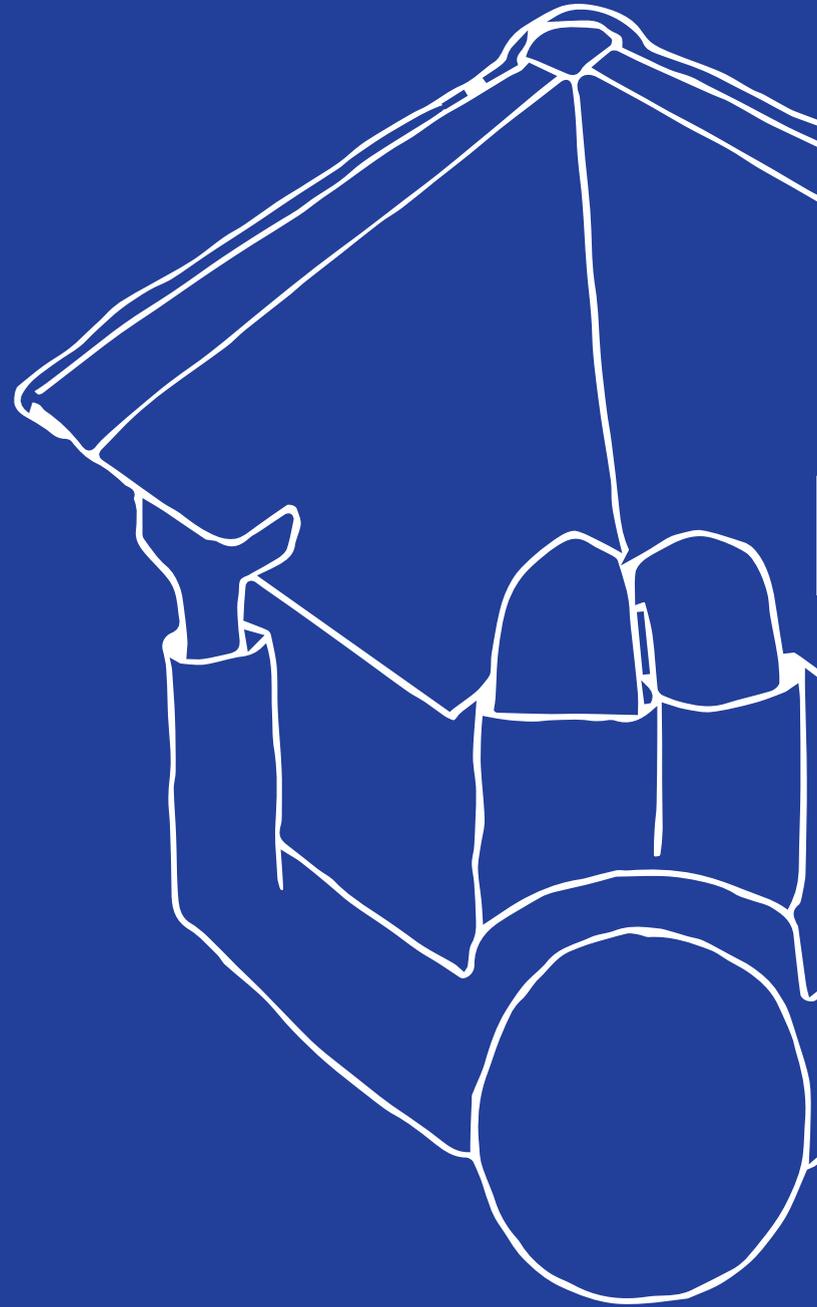
Another problem we encountered while interpreting the structural model, is that suppressor effects seem to occur. The problem is mainly located in the effects of Cognition on Intention. New research might want to test whether mediation of the effect of Cognition on Intention through Subjective Norm, for instance, results in a better interpretable model.

Implications for educational practice

In the minds of teachers the promotion of fiction and nonfiction texts in class involves different constructs and different inter-construct relations. For educational practice this implies that teachers and teacher trainers should be aware that both types of reading promotion require specific attention. If we want teachers to promote fiction and nonfiction reading, the facilitation (PBC) of reading promotion needs attention, maybe even more so for the promotion of nonfiction, since the path from Intentions to Behavior is even non-significant for nonfiction, although the zero order correlations from Intention to Behavior for promoting fiction and nonfiction, respectively, are almost equal. Also, attention should be given to Affect and Subjective Norm, since both constructs predict the Intention scores rather well, for promoting both fiction and nonfiction.

The means of the MPB constructs show that on average, teachers have a positive stance towards reading promotion, although substantial proportions of teachers still score below 4, which indicates a positive viewpoint. So, in teacher training, it is essential to convince the prospective teachers of the importance of promoting the reading of fiction and nonfiction in class.

Students'
attitude
to reading
fiction and
nonfiction
texts



Center for
Literacy

Abstract

Classroom efforts to increase student's reading attitude and behavior may have important implications for student reading proficiency. This article addresses the question of how we can promote students' leisure time reading of fiction and nonfiction. To answer the research questions, the Model of Planned Behavior was used. A questionnaire to measure all constructs present in the model was completed by 994 students (grade 5 and 6), who also kept a one-week log of their leisure reading behavior. Our results show the MPB to be an adequate model for predicting student leisure time reading behavior. Results indicate that separate models for fiction and nonfiction are needed, since in students' minds both the precursors of reading behavior and the behavior itself differ depending on whether these apply to fiction or nonfiction texts. In addition, the results suggest that students' reading of children's novels is best predicted by the Perceived Behavioral Control or the availability of texts and time and space to perform reading behavior. The reading of nonfiction texts is best predicted by the Intention to read nonfiction, which is best predicted by how much students enjoy it (Affect) and whether they believe they should (Subjective Norm). Using these results to promote leisure time reading shows that different approaches are required for fiction and for nonfiction.

Introduction

The available evidence on trends over time indicate that children's reading for pleasure has declined in recent years (Gubbels et al., 2017; Clark & Rumbold, 2006). Also, the reading attitude of elementary school students seems to deteriorate between 1st and 6th grade (McKenna et al., 1995; Petscher, 2010) and students in the Netherlands show a relatively negative attitude towards leisure time reading (Gubbels et al., 2017).

On average, children who read more for leisure score higher on language proficiency tests. For example, these children have broader vocabularies than children who do not read in their spare time. They also have greater reading comprehension skills, stronger spelling skills and are better at technical reading skills (Mol & Bus, 2011; Mullis et al., 2017; OECD, 2009). For elementary students, reading attitude and reading achievement turned out to be positively related according to a meta-analysis of 32 studies by Petscher (2010). Leisure reading is also important for academic achievement and social mobility, which effect is thought to be mediated through increased cognitive skills (Sullivan & Brown, 2015).

Students read more when they like to read, thus increasing their reading proficiency, which in turn makes reading even more pleasurable and stimulates them to read more, thus creating an upward, or downward spiral (Kush & Watkins, 1996; Kush et al., 2005; McKenna et al., 1995; Mol & Bus, 2011; Urhahne, 2015; Boerma et al., 2016). Thus, classroom efforts to increase children's leisure time reading attitude and behavior may have important implications for students' attitude and for students' reading achievement, school career and chances on the labor market.

We know teachers can influence students' reading attitude (e.g. De Naeghel et al., 2014a) and that in doing so, teachers focus mainly on promoting the reading of fiction texts (Chapter 2), which corresponds to the findings reported in other studies (e.g. Van Schooten, 1997) and policy papers (e.g. Stichting Lezen, 2012). This is particularly interesting because we know the reading of informational nonfiction texts has several advantages for students, in addition to the affordances fiction offers.

Firstly, nonfiction can engage students with aspects of the real world by communicating factual information (Duke & Bennett-Armistead, 2003; Moss, 2005; Moss & Hendershot, 2002; Ness, 2011; Yopp & Yopp, 2006; Young et al., 2007). Connecting text to real-life experience motivates children to read (Dreher, 2003;

Duke, 2003; Smith & Wilhelm, 2008). Secondly, nonfiction often has technical or content-specific vocabulary (Moss, 2005). Also, clear text structures, like problem-solution, or cause and effect, are common. The same holds for embedded graphical features such as diagrams, charts, and maps (Duke, 2000; Duke & Kays, 1998; Pappas, 2006).

These considerations call into question whether focusing solely or primarily on promoting the reading of fiction is wise. Leads for a broader approach can be found in teachers' attitudes. In Chapter 4, we showed that teachers' attitude towards stimulating their students to read fiction is not the same as their attitude towards stimulating the reading of nonfiction. This outcome prompts the question of whether students also have different attitudes towards reading fiction and nonfiction or is their reading attitude one and the same construct, with no distinctions between reading fiction and nonfiction. Answering this question is important, as it will inform efforts to improve students' attitude towards reading nonfiction.

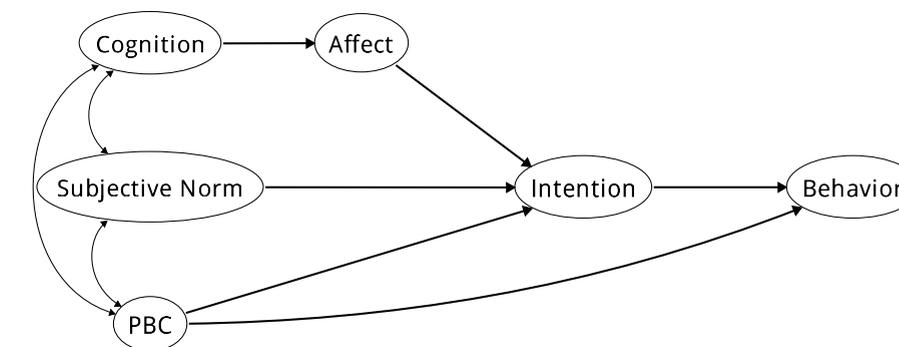
Research teaches us that behavior is driven by attitude, and also by other constructs. The Model of Planned Behavior (MPB) is a leading theory of what determines the behavior a person performs. The MPB is an often used, validated model in social psychology research (Norwich & Duncan, 1990; Norwich & Rovoli, 1993; Simonson & Maushak, 1996; Van den Putte & Hoogstraten, 1997; Van der Pligt & De Vries, 1998), that has been adapted in different ways over the years. The MPB is demonstrated to be a useful model for researching the causes of leisure time fiction reading of 7th to 9th grade students (Van Schooten & De Glopper, 2002). When it comes to reading nonfiction, little research has been done; it is not clear whether the MPB is an appropriate model for predicting the leisure time reading of nonfiction by elementary school students.

Fishbein and Ajzen (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 2010) who developed the MPB, propose that human behavior can be predicted from a person's Behavioral Intentions and Perceived Behavioral Control, and that Intentions are determined by the person's attitude (Affect) toward the behavior, his or her Subjective Norm regarding the behavior, and the Perceived Behavioral Control regarding the behavior (Gold, 2011). In the MPB, it is supposed that the attitude is influenced by the combination of outcomes thought to result from performing the behavior, and the evaluation (positive or negative) of these outcomes (Cognitions). The Subjective Norm is seen as the combination of the norms in an individual's environment and his or her motivation to comply with these norms. The Perceived Behavioral Control is seen as a combination of the options an individual sees for performing the behavior, and the perceived ease or difficulty for

him or her in realizing these options. Figure 1 illustrates the MPB and its postulated causal structure (Van Schooten, 2005).

Figure 1

The Model of Planned Behavior and its postulated causal structure



The direct influence of PBC on Behavior is motivated by the idea that a person might have a strong intention to perform a certain behavior, but at the same time might perceive the likelihood of being able to perform that behavior to be very low.

Triandis (1977) offers a version of the MPB very similar to the original Fishbein and Ajzen model. In the Triandis version, the Cognitive component has a direct effect on Intentions, whereas in the Fishbein and Ajzen model, the effect of Cognitions on Intentions is mediated by Affect. The presupposed separate influence of Cognitions and Affect on Intentions in the Triandis version of the MPB, means that the evaluations of the outcomes of behavior can affect the intention to perform the behavior, independent of whether a person likes or dislikes performing the behavior.

In this study, we want to discover whether we can predict children's leisure time reading of fiction and nonfiction texts by means of the MPB. Therefore, we need to know whether the MPB constructs regarding reading fiction and nonfiction relate to separate constructs in the minds of students, or not. In addition, we want to verify whether or not the effect of Cognition is mediated by Affect. By identifying the influence that the different constructs of the model have on Behavioral Intentions and leisure time reading behavior, we aim to gain information about the constructs that should be addressed by teachers in order to promote students' leisure time reading.

Research Questions

The first question we aim to answer is whether the Model of Planned Behavior with 5 constructs, namely Cognition, Affect, Subjective Norm, PBC and Intention, is an adequate model for predicting the leisure reading behavior of 5th and 6th grade elementary school students, for both fiction and nonfiction. The reason for focusing on 5th and 6th grade is that these students show a decline in leisure time reading attitude and behavior and that promoting reading should start at an early age. If the model is adequate, the second question is whether or not we need different constructs in the model for leisure time reading of fiction and of nonfiction. In this way, we aim to answer the question whether or not these MPB constructs are distinct concepts in students' minds, when referring to fiction or nonfiction. The third research question is which of the two aforementioned models fit best: a model with Cognition loading directly on Intentions (Triandis) or a model in which the effect of Cognition on Intentions is mediated through Affect (Fishbein & Ajzen, 2010). Research question four concerns the strengths of the relationships between reading behavior and the remaining constructs. The answer to this question can be used to formulate advice to elementary school teachers about how best to stimulate their students' leisure time reading.

Method

Design

To answer the research questions, a questionnaire was distributed among a cross-sectional convenience sample. Since we do not aim to generalize mean scores to a population, a random sample is not necessary. The aim of the study is to test theory or relations between items and constructs.

Instruments

To measure all MPB constructs except behavior, 30 items regarding the reading of nonfiction and 32 items regarding the reading of fiction were constructed based on the questionnaires used by Van Schooten (2005) and by Cunes and Maliepaard (2013). These items consist of statements regarding Cognition, Affect, Subjective Norm, Perceived Behavioral Control and Intentions concerning the reading of fiction and nonfiction texts. Students were asked to indicate on a 5-point Likert scale (1: "strongly disagree", 2: "disagree", 3: "undecided", 4: "agree" and 5: "strongly agree") the extent to which they agree

with a given statement. See Table 1 for example statements.

Table 1

Examples of questionnaire items (nonfiction)

Cognition	By reading nonfiction texts, my school results are stimulated
Affect	I like to read nonfiction texts in my spare time
Subjective Norm	My friends find it important to read nonfiction texts
PBC	I have no time left to read nonfiction texts
Intention	I plan to read nonfiction texts from the library sometime soon

Behavior was measured by keeping a one-week log. The log concerned the minutes per day spent reading children's novels and comics (reading of fiction), and reading magazines, newspapers, and computer screens (reading of nonfiction) at home. The logs were completed in the following manner: on Tuesday, the minutes spent reading on Monday; on Wednesday, the minutes spent on Tuesday; on Thursday, the minutes on Wednesday; on Friday the minutes on Thursday; and on Monday minutes spent on Friday and over the weekend. This resulted in six scores for each type of reading material. The response options in the log were presented as intervals. These were transformed to scores in the following manner: for 1-5 minutes we scored 3 minutes; for 5-10 minutes we scored 7; for 20-30 minutes we scored 25; for 30-60 minutes we scored 45 minutes. For the score 'more than 60 minutes' we made an educated guess and set the score at 90 minutes. These transformations served to approximate a ratio variable.

All items were piloted with two classes. Based on this pilot, some extra instruction for filling in the log was added. Descriptive statistics and reliabilities (Cronbach's alpha) are reported in Table 7 (Appendix).

Sample

The sample consists of 994 students (484 boys, 463 girls and 47 missing values) coming from 29 different schools, 454 students were in 5th grade and 522 students were in 6th grade (18 missing values). The average age of students, in years, was 10.88 (standard deviation =.77). 71.5 % of students' fathers was born in the Netherlands, 6.3% in Morocco and 5.1% in Turkey. 73% of students' mothers was born in the Netherlands, 6.0% in Morocco and 4.1% in Turkey. 76% of students speaks Dutch with both their mother and father.

Data Analyses

To assess whether the MPB is an appropriate model for the data (research question 1), confirmatory factor analyses were conducted by means of the program Mplus (Muthén & Muthén, 2017). The behavior constructs are indicated by continuous variables (in minutes) stemming from the log files. All other items are categorical. Covariance structures were therefore calculated with the Weighted Least Squares with robust standard errors and Means and Variances (WLSMV) method. Model fit is evaluated by means of several fit indices. Because the χ^2 statistic has very large power with large sample sizes and tests exact fit, which is a very strict criterion for social science research, the Comparative Fit Index (CFI), the Tucker Lewis index (TLI), and Root Mean Square Error of Approximation (RMSEA) were also examined. Generally, the fit of a model is considered acceptable (fair) when CFI and TLI are larger than .90 and good when larger than .95 (Bentler, 1992; Hu & Bentler, 1999). In addition, RMSEA-values below .05 are considered indicative of close (good) fit, below .08 of fair fit, between .08 and .10 of mediocre fit and larger than .10 of poor fit (Hu & Bentler, 1999; MacCallum et al., 1996). Modification Indices, factor loadings and standardized residuals were used to locate the items that caused misfit, and to consequently remove items to perform a second CFA in the same sample on the adjusted model.

Research question 2 is answered by comparing two nested models, one with separate constructs for fiction and nonfiction (e.g., Cognition fiction and Cognition nonfiction) and one in which similar constructs for fiction and nonfiction are combined into one construct (e.g., Cognition fiction and Cognition nonfiction as one construct). However, the five behavior constructs were kept separate in both nested models, since they clearly distinguish between the reading of fiction and of nonfiction. Differences between nested models were tested by means of the option DiffTest in Mplus, since we use WLSMV. DiffTest generates a χ^2 value, corrected for the WLSMV method. In large samples, however, even non-substantial or trivial model differences may yield statistically significant χ^2 differences. For this reason, fit deterioration due to model restrictions between nested models is also tested using three other criteria: the Root Deterioration per Restriction (RDR; Browne & Du Toit, 1992; Dudgeon, 2004), the Expected Cross-Validation Index (ECVI) difference (Browne & Du Toit, 1992; Oort, 2009), and the CFI difference (Cheung & Rensvold, 2002). The NIESEM computer program was used to calculate the RDR values and ECVI differences and associated 90% confidence intervals (Dudgeon, 2003). If the χ^2 difference is not significant, the models are considered equal, and the most parsimonious model is chosen.

Because of strong affinity between the RDR and the RMSEA (Browne & Du Toit, 1992), we used similar cut-off values for the RDR to evaluate fit improvement. If the RDR does not exceed .08, the models are considered approximately equal. ECVI differences of zero may be regarded as indicative of models not differing significantly (Oort, 2009). If the 90% confidence interval around the ECVI difference includes zero, models are considered equivalent. Finally, based on the Monte Carlo simulation study of Cheung and Rensvold (2002), differences in CFI of both nested models should be smaller than or equal to .01 for models to be considered equivalent. Substantial differences between models are only considered to exist when the change in CFI is greater than .02 (Cheung & Rensvold, 1999).

Research question 3, which addresses the appropriateness of the Ajzen and Fishbein or the Triandis version of the MPB, is answered the same way as research question two, since the MPB and the Triandis model are also nested.

Research question 4 is answered through inspection of the standardized loadings of the best fitting structural model. To be able to detect suppressor effects, the zero-order correlations between sums of the items used in the best fitting model, are also checked. To verify the reliability of these sums, Cronbach's alpha is calculated for each sum.

Results

Model fit MPB

To assess whether the Model of Planned Behavior is an adequate model for describing the data and predicting the leisure reading behavior of students, the MPB as suggested by Ajzen and Fishbein was fitted as intended during the construction of the instrument: with separate constructs for fiction and nonfiction and the effect of Cognition mediated by Affect. This model shows a reasonable fit, except for the CFI and TLI values ($n=989$, $N\text{ items}=92$, $\chi^2=8700.078$; $df=4051$; $p<.000$, $RMSEA=.034$ (90% C.I.=.033-.035); $CFI=.893$; $TLI=.890$).

After removing eleven items that have large modification indices or large residual variances, the Ajzen and Fishbein version of the MPB model with separate constructs for fiction and nonfiction and the five constructs for behavior shows a close fit ($n=989$, $N\text{ items}=81$, $\chi^2=5910.572$, $df=3116$, $p<.000$, $RMSEA=.03$, $CFI=0.932$, $TLI=.930$) with significant factor loadings of all items on the factor they are supposed to measure and also of each of the six log scores (Monday, Tuesday, Wednesday, Thursday, Friday and the weekend) on each of the five

behavior constructs (two for fiction reading and three for nonfiction reading). We can conclude that the Ajzen and Fishbein version of the MPB is an adequate model for the data regarding the reading of fiction and nonfiction of students in 5th and 6th grades. However, the correlation between PBC fiction and nonfiction is 1.078, which means they measure one and the same construct for fiction and nonfiction texts¹.

Fiction and nonfiction as separate constructs

To determine whether the attitude toward reading fiction and nonfiction texts differs in the minds of students, the above model with separate constructs for fiction and nonfiction was compared with a model in which we did not separate the constructs for fiction and nonfiction (see Table 2). In these analyses we left out the five Conation constructs, since this research question does not pertain to the five behavior constructs.

Table 2

Difference in model fit of the nested models of the MPB: one with ten separate constructs for fiction and nonfiction (Model 1) and one with 5 constructs, fiction and nonfiction constructs combined (Model 2), n=987. (Both models in the Ajzen and Fishbein version).

	χ^2/df	p	RMSEA	CFI	TLI	Difference in fit
Model 1	4294.952	.000	.05	.91	.91	
separate constructs for fiction and nonfiction	1179		(fair fit)			
Model 2	9905.590	.000	.09	.76	.74	
combined constructs for fiction and nonfiction	1214		(mediocre fit)			
Difference in fit 1-2	1943.948 35	.000				RDR=.235 p=.000 (RMSEA=.08) Difference in ML-ECVI value=1.897 (90% CI=1.7501-2.0510) Difference in CFI=.912-.755=.157

¹ Correlations > 1 and < -1 can occur when estimated in a CFA and are indicative of perfect correlations. We also fitted an MPB model with the PBC constructs as one (N= 989, N items=81, X2 = 6051.092, df= 3121, p <.000, RMSEA=.03, CFI=0.929, TLI=.926). The model is graphically presented in Appendix A figure 2.

The model with separate constructs shows a fair fit according to RMSEA and CFI and TLI. The model with constructs for fiction and nonfiction combined shows a mediocre fit according to RMSEA and misfit according to CFI and TLI. Comparing these two nested models (see Table 3), we see that the model having separate fiction and nonfiction constructs for each of the components of the MPB fits significantly better than a model with the constructs combined: RDR is larger than .08, so models are not equivalent, the 90% confidence interval of ECVI does not contain the value zero and the difference in CFI is .157 and thus exceeds .02. All these indices point to a significantly better fit for the model with separate constructs: the conclusion is that in students' minds, the MPB constructs regarding the reading of fiction differ from those for the reading of nonfiction texts. As indicated, we did not test whether the five Conation constructs should be considered separately or not.

Original MPB or Triandis' version

To answer the third research question, two models were compared, one with a structural part according to the Ajzen and Fishbein version of the MPB with the effects of both Cognition constructs (fiction and nonfiction) on both Intention constructs (fiction and nonfiction) mediated by the respective Affect construct (fiction and nonfiction) and a second model with the paths of both Cognition constructs directly on each corresponding Intention construct (Triandis, 1977). Since the outcome of this CFA is also used for answering research question four concerning the prediction of behavior, behavior constructs are included in these models. Despite their more than perfect correlation, the PBC constructs are kept separate. A model fitted with both PBC constructs as one and the same is added to the appendix (See Appendix A).

Table 3*Model fit Triandis vs Ajzen and Fishbein version of MPB, n=989, n items=81*

	χ^2 / df	p	RMSEA	CFI	TLI	Difference in fit
Model A: A&F (see research question 1) with Conation constructs	5910.572 116	.0000	.03 (close fit)	.93	.93	
Model B: Triandis with Conation constructs	5757.347 3103	.0000	.03 (close fit)	.94	.93	
Difference in fit A-B	133.138 13	.000				RDR=.0968 P (RMSEA=.08) =.0001 difference in ML-ECVI value = .1063 (90% CI: .0712 - .1496) Difference in CFI =.936-.932 = .004

According to the results presented in Table 3, not all indices point to differences between the separate models. The difference in CFI .004, suggests an equal fit for both models. According to χ^2 and the RDR (>.08), there is a difference in fit between the models. Since the value 0 is not in the 90% confidence interval of ECVI, this points to a better fit for the Triandis version. Also the indicators RDR and ECVI point to a better fit for the Triandis version. Based on these results, our conclusion is that the data all together support the Triandis version of the MPB.

Strengths of the relationships between the different constructs

To answer the fourth research question concerning the strengths of the relationships between the different constructs, the Triandis version with separate factors for fiction and nonfiction is graphically presented with the standardized regression weights (β) and the correlations² in Figure 1.

First, we notice that PBC fiction and nonfiction again have a correlation of 1.108***, indicating that these factors represent one and the same construct³; as we already found in the model tested in the above first section on results (Model fit MPB), limiting factors such as money, time and availability are of equal importance for reading fiction or nonfiction.

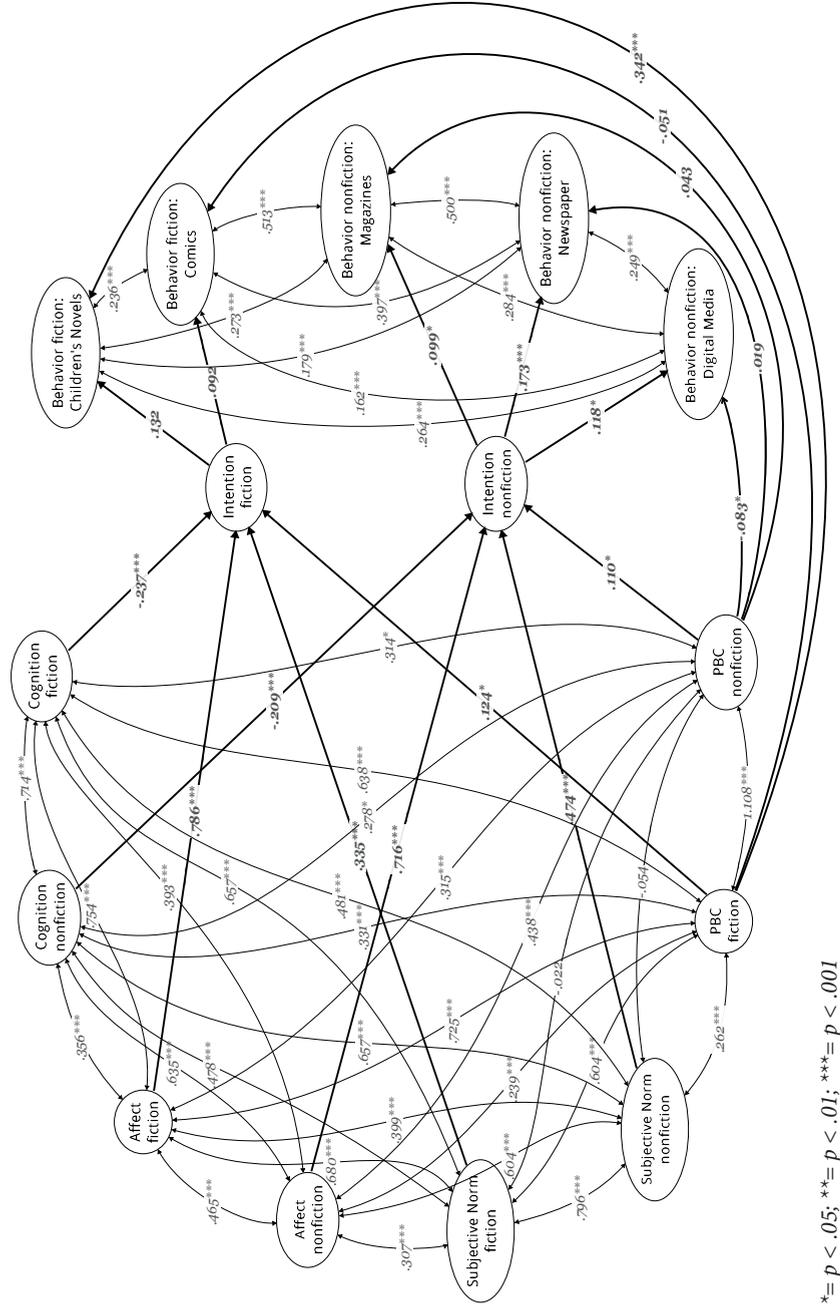
Next, the results concerning the path model merit attention. We focus on the extent to which MPB constructs are predicted by the other constructs in the model. In order to detect suppressor effects, the zero-order correlations between sums of the items used in the CFA model presented in Figure 1, are computed and presented in Table 4 (Appendix B shows the reliability of the sum scores). Tables 4 and 5 show the factor loadings including the zero order correlations between Intention sums and other MPB sums and 5 Conation constructs. Cognition fiction shows a large suppressor effect (β is -.237 in the model and the zero-order correlation r is .475; see Table 4), as does Cognition nonfiction (β = -.209 in the model and r is .421; see Table 4), which means interpreting both paths from Cognition on Intentions must be done with great caution.

² Standardized regression coefficients are associated with single arrows, correlations are tied to double arrows.

³ Correlations > 1 and < -1 can occur when estimated in a CFA and are indicative of perfect correlations

Figure 1

Students' MPB model for predicting the leisure reading of fiction and nonfiction texts



* = $p < .05$; ** = $p < .01$; *** = $p < .001$

These outcomes show that students' reading of nonfiction texts is significantly predicted by the Intention to read nonfiction (standardized loadings of .099* for reading magazines, .173*** for reading newspapers and .118* for reading digital media. See Figure 1), although the standardized regression coefficients are very small. The reading of fiction is not even significantly predicted by the Intention to read fiction. Apparently, whether or not students read fiction and nonfiction texts, is mainly caused by factors other than Intentions. This could be partly explained by the influence of PBC. This represents students' perceptions of whether they have sufficient ability, resources and opportunities to read in leisure time. PBC fiction has a significant and substantial standardized path directly on children's novels (.342***), whereas PBC nonfiction has a rather small negative path (-.083*) on digital media. The standardized path of PBC on Intention constructs is .124* for fiction and .110* for nonfiction. Noteworthy is that the zero-order correlation between PBC fiction and Intentions fiction is .501** (see Table 6).

Correlations between fiction and nonfiction constructs are all medium to high (Cognition fiction and nonfiction .714***; Affect fiction and nonfiction .465***; Subjective Norm fiction and nonfiction .796***), with the exception of both PBC constructs, which, since they correlate perfectly, can be considered to be one and the same thing.

For both fiction and nonfiction reading, Affect has the strongest standardized path on both Intention constructs (for fiction .786*** and for nonfiction .716***).

Cognition for both fiction and nonfiction have significant negative paths on both Intention constructs (-.237*** for Cognition fiction and -.209*** for Cognition nonfiction). However, the zero order correlations (.475** and .421**) show that these loadings represent suppressor effects and as such cannot be interpreted as a negative relationship between these Cognition constructs and both Intention constructs.

Both Subjective Norm constructs show a rather strong standardized path on their respective Intention constructs (.335*** for Subjective Norm fiction and .474*** for Subjective Norm nonfiction).

Table 4

Factor loadings (and zero order correlations) between the Intention sums on the one hand and sums for Cognition, Affect, Subjective Norm and PBC on the other (n=904-853)

	Intention fiction	Intention nonfiction
Cognition fiction	-.237 *** (.475**)	
Cognition nonfiction		-.209*** (.421**)
Affect fiction	.786*** (.783**)	
Affect nonfiction		.716***(.748**)
Subjective Norm fiction	.335*** (.644**)	
Subjective Norm nonfiction		.474***(.593**)
PBC fiction	.124* (.501**)	
PBC nonfiction		.110* (.155)**

*= $p < .05$; **= $p < .01$; ***= $p < .001$

Table 5

Factor loadings (and zero order correlations) between the Intention and PBC sums and the Conation constructs (n=488-606)

	Intention fiction	Intention Nonfiction	PBC Fiction	PBC nonfiction
Children's novels	.132 (.375**)		.342*** (.307***)	
Fiction comics	.092 (.044)		-.051 (.053)	
Nonfiction magazines		.099* (.074)		.043 (-.060)
Newspaper		.173*** (.161**)		.019 (.020)
Nonfiction digital media		.118* (.089*)		-.083* (-.005)

*= $p < .05$; **= $p < .01$; ***= $p < .001$

Conclusion and discussion

In the above, different structural models were discussed to predict students' leisure time fiction and nonfiction reading in order to discover the best way for teachers to promote their students' leisure time reading.

Firstly, we checked whether the MPB is an adequate model for describing the data we collected to measure the MPB constructs, and for predicting students' leisure time reading activities. Results show that the MPB model displays a satisfactory fit.

Secondly, we checked whether we should use different MPB constructs for the leisure time reading of fiction and of nonfiction. This appeared to be the case, as

the model shows a significantly better fit when the MPB constructs for fiction and nonfiction are not combined, implying that in students' minds, the MPB constructs differ depending on whether they relate to the leisure time reading of fiction or nonfiction, answering research question two. An exception to this is that PBC fiction and PBC nonfiction appear to be one and the same for the students in our sample.

Thirdly, when Cognition constructs load directly on Intention constructs (Triandis), and the effect of Cognition is not mediated by Affect, the model fits slightly better. This leads to a preference for the less parsimonious Triandis version of the model. However, inspection of the zero order correlations shows that, in the Triandis version, the paths from Cognition on Intention should be interpreted as suppressor effects. The same applies to the path of Intention fiction on the reading of children's novels. For instance, the zero-order correlation between Intention fiction and the leisure time reading of children's novels is .375, while the path between both constructs in the Triandis model is not even significant. Clearly, multicollinearity presents a problem for interpreting the paths from Cognition in the structural model of the Triandis version of the MPB in this study.

Results regarding the strengths of the relationships between different constructs show that the reading of nonfiction texts by students is significantly predicted by the Intention to read nonfiction, but in the structural model the reading of fiction is not significantly related to the Intention to read fiction at all, and even the significant paths from Intention to read nonfiction to the reading of nonfiction are small. Also, the zero-order correlations between these constructs are small or non-significant. The only exception is the zero order correlation between the Intention to read fiction and the reading of children's novels, which amounts to .375. Students' reading of fiction and nonfiction texts seems to be mainly caused by factors other than Intentions.

One explanation could be related to the influence of PBC. This construct represents students' perceptions of whether they have sufficient ability, resources and opportunities to read in leisure time. From the structural model and the zero order correlations, we can conclude that stimulating PBC might be a good way to enhance leisure reading, even though students score on average rather high on PBC. Given the perfect correlation between PBC fiction and nonfiction, we may regard PBC as one construct regardless of the type of reading material.

Another explanation is that measuring reading behavior for one week might not be enough to create a good indicator of general reading behavior, despite

the fact that the homogeneity within the week is very high: see Table 7 in the Appendix (Otter, 1995). Also, it is possible that we need to include the effect of habit on actual reading behavior, as is suggested by Ronis et al. (1989) and Triandis (1980). Behavior that has become habitual appears to be less influenced by the constructs in the MPB.

Age could also play a part. It is possible that be that children's intentions are unstable. The question is in how far students aged 11-12 are capable of planning and controlling their behavior. With age, self-efficacy increases and self-regulation strategies appear to develop from 5th to 11th grade (Zimmerman & Martinez-Pons, 1990).

Limitations and suggestions for future research

First, the measurement of student reading behavior spans only one week. It is doubtful whether one week is sufficient for measuring a stable student trait.

The second point of concern is the number of items we had to remove to obtain a good model fit. Of course deleting items does not always mean items are not measuring the intended trait. Items that are very similar can also cause fit problems since the model will detect correlated error for these items. A replication could shed light on the degree to which the removal of fiction items has led to a capitalizing on chance.

Future studies into leisure time reading behavior with students of this age may benefit from the following suggestions. For example, the measurement of behavior could benefit from using log files for not one but several, randomly chosen, weeks over a longer period of time.

Apart from the measurement of Behavior, adding the construct of habit could lead to new insights into causal factors influencing Behavior and maybe explain the weak relationships found between Intentions and Behavior. Of course one might doubt whether young students have developed reading habits. Including habit to the MPB might also answer this question.

Also, research could benefit from a longitudinal approach to verify trends in MPB constructs, and to investigate whether a specific approach by teachers or personal characteristics of pupils coincide with trends in MPB constructs and leisure reading, looking at fiction and nonfiction separately. The path of PBC to the reading of children's novels is one to delve into further. What precisely influences students to read novels or not? Is it the number of books they have access to? Could they be hindered by being unsure about which book to choose?

Implications for Educational Practice

This study indicates that in students' minds there is a difference between the reading of fiction and nonfiction texts. Distinguishing these types of reading material in school might make a difference in the reading enjoyment of different types of students.

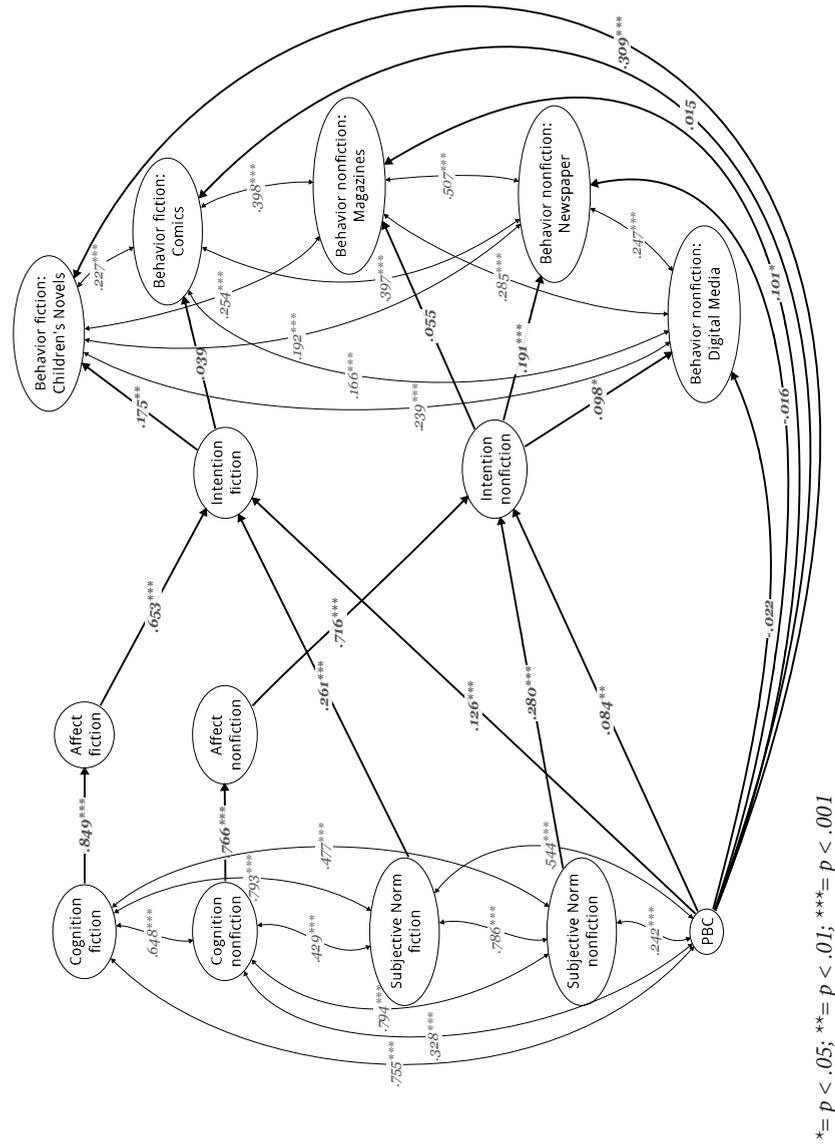
Because of the effect of PBC on students' behavior regarding reading fiction, teachers should check the availability of resources at home and in school, and children's access to a library. Teachers also play an important role in building their students' ability to pick appropriate reading material. Finally, the time and space teachers offer their students to read, and the provision of a rich literary environment, can help students to become fervent leisure time readers.

Why students hardly act as they intend to do, is an open question. Of all MPB constructs predicting behavior, in the model only PBC shows a substantial path to the reading of children's novels. The other MPB constructs do not predict student leisure reading behavior very well. One exception can be found when inspecting the zero order correlations. Here we find a correlation of .375 between the Intention to read fiction and the reading of children's novels. If we assume that students might take more action in line with their intentions as they grow up, stimulating the Intention to read seems useful. When we examine how well the other MPB constructs predict both Intention constructs, we see all paths are significant. We may therefore conclude that, when it comes to stimulating the Intention to read, all MPB constructs could be targeted. Both Affect constructs, in particular, predict both Intention constructs very well, therefore it seems wise to focus efforts on enlarging Affect.

Appendix A

Ajzen and Fishbein model with one PBC construct.

Figure 2
Students attitude toward reading fiction and nonfiction, MPB with Conation and PBC fiction and nonfiction as one construct



Appendix B

Reliability of MPB sum scores

Table 6 below shows that the highest mean is for the PBC constructs and the lowest is for Intention nonfiction (but alpha is low). Intention nonfiction has a mean of 2.64, so students are less inclined to read nonfiction. Affect shows the same: on average students do not really like reading nonfiction. It would be interesting to examine the difference between boys and girls next. As means on PBC are fairly high, in general, according to students, time, place and money do not seem to be the issue. Affect fiction also has a high mean.

Table 6

Reliability of MPB sum scores (M: 1= items belonging to this construct are strongly disagreed with 5=strongly agree with importance of constructs)

Construct	Alpha	No. items	M	SD	SE	n
Cognition fiction CFA	.56	4	3.37	.66	.02	919
Cognition nonfiction CFA	.57	6	3.45	.53	.02	928
Affect fiction CFA	.87	6	3.57	.91	.03	897
Affect nonfiction CFA	.81	6	2.97	.81	.03	924
Subjective Norm fiction CFA	.79	5	3.16	.87	.03	912
Subjective Norm nonfiction CFA	.72	5	2.90	.77	.03	916
PBC fiction CFA	.55	5	3.68	.70	.02	893
PBC fiction all items	.63	8	3.71	.62	.02	868
PBC nonfiction CFA	.20	2	3.72	.85	.03	943
PBC nonfiction all items	.57	6	3.59	.66	.02	916
Intention fiction CFA	.87	6	3.25	.99	.03	902
Intention nonfiction CFA	.82	6	2.64	.82	.03	917

Table 7 refers to the average time spent on different reading activities; it shows that differences in attitudes toward fiction and nonfiction can also be seen in behavior. The reading of Children’s novels has a mean of 23 minutes over 7 days (including the weekend). Digital media also has a high mean, although this is substantially less than time spent reading children novels.

Table 7

Reliability of MPB sums behavioral constructs; means in minutes per day

Construct	Alpha	No. items	M	SD	SE	n
1. Children novels	.90	6	23.13	20.74	.81	652
2. Magazines	.84	6	5.23	10.09	.43	561
3. Comics	.89	6	8.18	13.93	.59	553
4. News paper	.81	6	1.87	4.84	.21	531
5. Digital media	.91	6	11.41	18.03	.80	507

General
discussion



Chapter 6

Introduction

Leisure time reading and elementary school students' reading attitude are strongly related to reading proficiency and educational success (Mol & Bus, 2011). Students who read more in leisure time have, on average, larger vocabularies, better reading comprehension skills and better spelling and technical reading skills (Mol & Bus, 2011; Mullis et al., 2017). Petscher (2010) conducted a meta-analysis of 32 studies and found a positive relationship between reading attitude and reading achievement for elementary students. The increased development of cognitive skills through reading in leisure time is not only important for academic achievement but also for social mobility (Sullivan & Brown, 2015). Mol and Bus (2011) found that if a person is to continue reading, it is vital to have positive experiences with reading. In view of this evidence it is troubling that new generations of children not only spend less time reading for pleasure, but also have a deteriorating attitude toward reading for pleasure, particularly in recent years (Gubbels et al., 2017; Clark & Rumbold, 2006). Also, elementary school students' reading attitude appears to deteriorate between 1st and 6th grade (McKenna et al., 1995; Petscher, 2010). In addition, international comparative research by the OECD of both PIRLS and PISA shows that students in the Netherlands score lower on reading attitude than students from other European countries (Gubbels et al., 2017). The challenge therefore is to stimulate students to read in their spare time and increase their reading pleasure.

Since the 1980s, promoting reading has been high on the Dutch political agenda, (Brinkman, 1985; Slob, 2020). One obvious way to do this is through reading promotion in schools, because we know teachers may influence student reading attitudes (e.g., De Naeghel, 2014). To what extent and in what ways teachers actually promote their students' leisure time reading is unclear. There is a surprising lack of research into elementary school teachers' behavior and attitude towards reading and reading promotion, which is remarkable, given the fact that the Dutch government has been prioritizing reading promotion for 35 years.

The aim of this dissertation is therefore to gain insight into the activities and attitudes of 5th and 6th grade elementary school teachers toward reading promotion, and more specifically toward reading promotion of fiction texts and non-fiction texts. Research into the amount of time, and the ways in which, teachers invest in reading promotion for both fiction and nonfiction texts, can give us more information on how to optimize teacher behavior and help counteract the low and deteriorating attitude of students toward reading and their sparse and

overall diminishing leisure time reading behavior. A second aim of this thesis is to look into the leisure time reading behavior of 5th and 6th grade students regarding both fiction and nonfiction texts. Using the Model of Planned Behavior, our aim is to determine which aspects show the most significant effects on reading behavior. This information can be used to direct teachers' promotion activities.

Research Questions

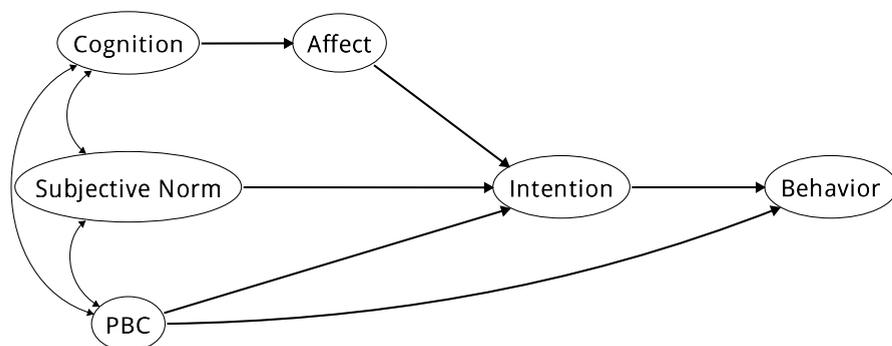
This thesis looked at which factors determine teachers' reading promotion behavior and students' reading behavior.

Our first study, reported in Chapter 2, addresses research questions that relate to teachers' reading promotion behavior. There is little or no information available concerning the actual implementation of reading promotion behavior of teachers in the Netherlands (Bonset & Hoogeveen, 2009). This study therefore aims to answer the question as to which reading promotion activities are performed in 5th and 6th grade in the Netherlands and how often these activities are performed. Given the decline in reading motivation, which starts in 4th grade, the so called '4th grade slump', the focus is on 5th and 6th grade (Chall, 1983; Tuijl, 2015). We wanted to know which reading promotion activities are performed by 5th and 6th grade teachers in the Netherlands and how often different reading promotion activities are used. The question was whether there are different clusters of classroom reading promotion activities and what teacher or class characteristics relate to the reading promotion activities performed by teachers in 5th and 6th grade in the Netherlands. Different clusters of types of reading promotion activities indicate that teachers are inclined to perform several reading promotion activities simultaneously. This in turn reveals different types of teacher behavior when it comes to reading promotion. The clustering of different reading promotion activities, combined with different patterns of behavior by teachers, is important for future research into the effects of different types of reading promotion activities on reading attitude, behavior and proficiency of students. The question addressed next is whether characteristics of teachers and of the students they teach are related to the frequency with which teachers perform different types of reading promotion activities. It is possible that teachers adjust their behavior to the needs or preferences of the students they teach. For instance, the differences in reading promotion behavior may be related to the educational stream or the class composition, i.e. the proportion of girls or the proportion of students from a high social economic status. In addition, teachers' personal preferences might affect their behavior. This may also hold for teachers' age or teaching experience.

Our second study is reported in Chapter 3. The focus here is on the relationship between teachers' perception of their reading promotion of fiction texts and their attitude toward performing reading promotion activities, i.e. activities to improve the reading behavior and reading attitude of their students. The study utilizes the often-used theoretical model for predicting and explaining behavior: the Model of Planned Behavior (MPB) developed by Fishbein and Ajzen (Ajzen, 1985, 1991; Fishbein, 1975). The MPB is a theoretical model of interrelated constructs that are thought to determine whether or not a person chooses to perform a certain behavior. According to the MPB, several constructs influence non-habitual, intentional behavior. Behavior is thought to be influenced by behavioral intentions to perform the behavior (Intentions) in the near future and the degree to which a person believes he or she is able to perform the behavior given the necessary conditions that must be met to do so (Perceived Behavioral Control). The Intentions are thought to be influenced by three constructs: the attitude or feelings toward performing the behavior (Affect), the person's norms concerning the behavior (Subjective Norm) and the Perceived Behavioral Control (PBC). Affect, lastly, is thought to be influenced by the positive or negative evaluations of outcomes of the anticipated behavior (Cognition), see Figure 1.

Figure 1

The Model of Planned Behavior and its postulated causal structure



Although the MPB is now the most widely used and validated model for attitude research, there is discussion about the hypothesized causal paths between the different constructs in the model. Studies show that, for some behavioral domains a model in which Affect and Cognition each have a direct causal effect on Intention fits better than the model proposed by Ajzen and Fishbein (e.g., Bagozzi

& Burnkrant, 1979, 1985; Brinberg, 1981; Fen & Sabaruddin, 2008; Triandis, 1977; Valois et al., 1988). Since Triandis (1977) was the first to suggest this, we refer to this model as the Triandis version. In this dissertation the question as to which causal paths show the best fit to the data, is also addressed.

The study answers the question of whether the MPB is an adequate model for predicting teachers' activities aimed at stimulating students to read fiction and if so, which of the two models fits best: a model in which Cognition is loading directly on Intentions (Triandis) or a model in which the effect of Cognition on Intention is mediated through Affect (MPB). We also wanted to identify the influence that Affect and Subjective Norm, and PBC have on the Intention to perform reading promotion behavior aimed at fiction, and on the actually acting out the behavior itself. By identifying the influence these factors have on the Intention to act out reading promotional behavior aimed at reading fiction, and on actual performance of the behavior itself, we can gather important knowledge about the constructs that need to be altered to affect a change in Intentions and Behavior (Fishbein & Ajzen, 2010). The third question was how positively or negatively the teachers in 5th and 6th grade in the Netherlands score on the aforementioned MPB constructs. Students in the Netherlands display a relatively negative attitude towards leisure time reading (Gubbels et al., 2017); we also know that teachers may influence these attitudes (e.g. De Naeghel et al., 2014a). It is therefore interesting to verify how a representative sample of teachers in the Netherlands scores on the MPB constructs with regard to performing reading promotion activities related to fiction. The fourth question was whether class or teacher characteristics, including behavior, covary with the scores on the MPB constructs. For instance, we want to know if there is a relationship between teaching experience or educational stream and the scores on different MPB constructs, or if teachers adapt their reading promotion behavior to the needs of the class and therefore perform more reading promotion activities in classes with students that read less (e.g., older students, students of low social economic status, students in lower educational streams and boys).

Chapter 4 reports on our third study. Here, we aim to answer whether the MPB is an adequate model for predicting teachers' behavior when it comes to encouraging their students to read nonfiction texts in their spare time and if so, which of the two aforementioned models fits best: Cognition loading directly on Intentions (Triandis, 1977) or Affect mediating the effect of Cognition on Intentions (Ajzen, 1991). The second research question is whether, when used to predict reading promotion behavior of 5th and 6th grade teachers, the respective

constructs of the MPB should be differentiated for reading fiction and nonfiction texts, or whether these constructs are independent of the type of reading material. If teachers have to help students to read nonfiction texts and if students' leisure time reading behavior, interest and engagement determines reading success (Guthrie et al., 2000), it might help to know to what extent teachers promote the reading of fiction and of nonfiction texts by their students and to detect what influences whether teachers promote the reading of not only fiction but also nonfiction texts. Also, where this differentiation of MPB constructs is needed, it is interesting to interpret the strengths of the relationships between the different components in the model separately for fiction and nonfiction texts (research question three).

Lastly, when results show that differentiation is needed, we want to answer the question of how favorably teachers score on each of the constructs and if, for each aspect of the model (Cognition, Affect etc.), teacher scores differ depending on whether the constructs relate to the promotion of fiction or nonfiction (research question four).

Our fourth and final study is reported in Chapter 5. Here, we ask the question of whether the Model of Planned Behavior, with five constructs, i.e. Cognition, Affect, Subjective Norm, PBC and Intention, is an adequate model for predicting the leisure reading behavior of 5th and 6th grade elementary school students for fiction and nonfiction. We wanted to discover whether or not different constructs in the model are required for leisure time reading of fiction and nonfiction and which of the two models fits best: a model with Cognition loading directly on Intentions (Triandis) or a model in which the effect of Cognition on Intentions is mediated through Affect (Ajzen & Fishbein, 2010). Finally, we examined the strengths of the relationships between reading behavior and the remaining constructs. The answer to this question can be used to formulate advice for elementary school teachers on how best to stimulate their students' leisure reading.

Method

To answer the questions in the above, a cross-sectional study was set up for Study 1. For Study 2, we used a random cross-sectional survey for the representative research question. A non-random cross-sectional sample was used to answer the other research questions. To answer our research questions in Study 3, we set up a non-random cross sectional survey study. To obtain answers for our research questions on students, in Study 4, a survey was distributed to a cross sectional convenience sample.

Instruments

In the first three studies, a questionnaire was used to measure teacher behavior and the constructs of the MPB. To measure student behavior, a one-week log was used. To measure the MPB constructs of students, a questionnaire was drawn up.

To construct the items for the teacher questionnaire to measure the variety and frequency of performed reading promotion activities (Study 1, Chapter 2), oral interviews were conducted with four 5th and 6th grade teachers and with three lecturers at a teacher training college. To include the views of policy makers and institutions for reading promotion, a representative of the Dutch Ministry of Education, and representatives of two Dutch foundations that focus on reading promotion, were also interviewed. Questions on background variables of teachers, such as gender, age (in days), educational background, number of years of teaching experience, grade taught, whether the teacher works part-time, the number of students in class and the percentage and number of girls, non-native Dutch speakers and students of low, medium and high socio-economic status. The resulting questionnaire contained 49 items on reading promotion activities classified into six a priori categories.

We constructed a questionnaire for measuring the MPB constructs in Study 2 (Chapter 3). 50 items were drawn up for this questionnaire. These items consisted of statements regarding Cognitions, Affect, Subjective Norms, Perceived Behavioral Control and Intentions towards performing the promotion of fiction reading in class (see Table 1). Respondents were asked to indicate, on a 5-point Likert response scale (1: "strongly disagree", 2: "disagree", 3: "undecided", 4: "agree" and 5: "strongly agree"), the extent to which they agree with the given statements. Behavior was measured by means of 32 items with 5-point Likert-scales (1=never; 2=a few times a year; 3=monthly; 4=weekly; 5=daily). These 32 items represent 8 different components of reading promotion behavior as identified in the exploratory principal components analysis reported in Chapter 2. These components are:

- 1) Introducing texts (e.g. do you introduce new fiction in class?)
- 2) Using new media (e.g. do you use audio books in class?)
- 3) Using highly ranked media (e.g. do you use award winning children's books in class?)
- 4) Obligatory extracurricular activities (e.g. do you visit a library with your class?)
- 5) Enabling reading (e.g. do you buy new fiction texts?)
- 6) Giving student assignments (e.g. do you let students recite?)
- 7) Reading obligatory texts at school (e.g. do you give free reading time with obligatory fiction?)
- 8) Using traditional media (e.g. do you use newspaper articles?).

These components show that the reading promotion activities of fiction and nonfiction sometimes cluster, implying that teachers do not always distinguish between fiction and nonfiction in their reading promotion behavior.

To measure all the nonfiction MPB constructs except behavior, in Study 3 (Chapter 4), 39 items for nonfiction were constructed. Respondents were asked to indicate on a 5-point Likert-scale (1: “strongly disagree”, 2: “disagree”, 3: “undecided”, 4: “agree” and 5: “strongly agree”) the extent to which they agree with a given statement.

To measure all the student MPB constructs except behavior, in Study 4, Chapter 5, 30 items related to reading nonfiction and 32 items related to reading fiction were constructed, based on the questionnaires used by Van Schooten (2005) and by Cunes and Maliepaard (2013). These items consist of statements concerning Cognition, Affect, Subjective Norm, Perceived Behavioral Control and Intentions toward the reading of fiction and nonfiction texts. Students were asked to indicate on a 5-point Likert scale the extent to which they agree with any given statement. Students kept a one-week log, which was used to measure student leisure time reading behavior. Reading at home was recorded in minutes per day; this related to reading children’s novels, and comics (reading of fiction) and magazines, newspapers, and computer screens (reading of nonfiction).

Samples

The first sample, used to describe the actual reading promotion behavior of 5th and 6th grade teachers in the Netherlands, consisted of 85 5th and 6th grade teachers from 69 schools in the Netherlands (Study 1, Chapter 2). The initial random sample taken from all elementary schools in the Netherlands, consisted of 100 schools, therefore the response at school level is 69%. Non-response analyses, with school characteristics available from the CBS (Statistics Netherlands), showed that the responding schools do not differ from the population of all primary schools in the Netherlands on any of these variables; this supports the generalizability of the parameters found in this sample.

To perform an exploratory factor analysis (principal component analyses), in order to determine whether we can discern different types of reading promoting activities, this representative sample was expanded with a convenience sample of 109 extra schools (Study 1, Chapter 2).

The third sample used to measure students’ behavior and the constructs of the MPB (Study 4, Chapter 5), consisted of 994 students from 29 different schools.

Data collection

All 5th and 6th grade teachers of participating schools were sent a survey with questions about their reading promotion behavior and items for measuring the other constructs of the MPB and demographic variables (Study 1, 2 and 3, Chapter 2, 3 and 4).

The students were asked to keep a daily log about their leisure time reading behavior for a period of one week, and to complete a survey containing items for measuring MPB constructs and demographic variables (Study 4, Chapter 5).

Analysis

To answer the research questions presented in Study 1 (Chapter 2), we conducted a principal components analyses (PCA), created sums based on the results of this analyses, and computed the homogeneity of these sums as indicator of reliability (Cronbach’s alpha). Frequencies with means and standard deviations and correlations between constructs were computed. Before conducting the PCA, we checked, using the Kolmogorov-Smirnov test, whether variables were normally distributed.

To answer the research questions reported in Chapters 3 and 4, we conducted confirmatory factor analyses using the Mplus program, with weighted least squares with means and variances. Since item scores are categorical (Likert scales 1-5), measurement and structural models were fitted simultaneously. The usual fit indices were used to evaluate model fit (Chi-square, RMSEA, GFI, TLI). Differences in model fit of nested models was tested by means of the option *diff-test* in Mplus. Zero order correlations were computed in order to detect and evaluate suppressor effects. To compare means on the different constructs again sums and also Cronbach’s alphas, were computed. Differences between sums were tested by means of independent samples t-tests. The assumption of homogeneity of variances was tested by means of Levene’s test. T-test results were adjusted for unequal variances when Levene’s test was significant.

The research into the reading behavior and other MPB constructs of students also uses CFA. The same indices were used as for the CFA’s mentioned in the above. However, with the student data, the comparison of the fit of nested models was also done by means of other fit indices than chi-square. Since the sample of students is much larger than the sample of teachers, the power of the chi-square test to compare nested models, is very large. Therefore we also used the Root Deterioration per Restriction (RDR), the expected cross validation index (ECVI) difference and the CFI difference (Dudgeon, 2003).

Main Findings

Teachers' reading promotion activities: variation, structure and correlates (Study 1, Chapter 2)

Exploratory factor analyses helped us identify thirteen different categories of reading promotion behavior. Analysis also showed that all reading promotion activities included in the questionnaire share a fair amount of common variance and can therefore be seen as indicative of one general construct. This implies that it is possible to say that there are teachers who invest more and teachers who invest less time promoting reading.

Teachers appeared to focus mainly on promoting the reading of fiction texts. Another noticeable result is that activities related to free reading are reported most frequently, and that activities requiring a more scholastic approach, such as using processing tasks on children's novels, are performed less frequently. It is worth noting that activities reported as being performed almost daily are activities requiring little or no preparation from the teacher.

Examining the correlations between types of behavior and teacher and class characteristics, we see that teachers appear to react to the composition of the class they teach: there is a small but significant correlation between the number and proportion of girls in class on the one hand, and the amount of reading promotion activities performed by teachers on the other. If teachers adapt their behavior to the needs of their students, one would expect more reading promotion in classes with more boys, since on average, boys read less than girls.

Female teachers are more inclined than male teachers to perform reading promotion activities. Teaching a combined class correlates with experiencing a more positive attitude toward reading promotion.

Determinants of teachers' reading promotion behavior regarding fiction (Study 2, Chapter 3)

The idea of Ajzen and Fishbein, that the effects of Cognition on Intention are mediated by Affect is not confirmed. A model in which Cognition loads directly onto Intentions (the Triandis version of the model) fits significantly better than a model in which the effect of Cognition is mediated by Affect. This invites the conclusion that teachers perform reading promotion activities when they think this is useful, independently of whether they like to do so. However, inspection of zero order correlations shows that the path from Cognition to Intentions in the Triandis version of the model is a suppressor effect. The good fit of the model

also supports the idea that performing reading promotion activities is volitional; teachers decide for themselves whether they perform more or less reading promotion activities. Correspondingly, the path found from Intention to Behavior is significant and substantial.

In addition, the results of the model fit for the leisure reading of fiction show that the Intention to perform reading promotion activities is best predicted by the normative stance the teacher takes toward reading promotion. In the model, Affect has the second largest loading on Intentions, implying that, besides the sense of a moral duty, the amount of enjoyment gleaned from performing reading promotion also plays an important role in predicting Intentions.

Surprisingly, output evaluations (Cognitions) and control options (PBC) do not show a significant path to Intentions.

In addition, all average scores of teachers indicate a positive stance towards reading promotion. At the same time, when looking at the standard deviations, we conclude that substantial proportions of teachers do not agree with the statements in the questionnaire. Furthermore, the positive consequences (Cognition) of reading promotion are considered larger for nonfiction than for fiction. On the other hand, teachers like (Affect) to promote the reading of fiction texts more than of nonfiction texts. The Perceived Behavioral Control means do not differ significantly for fiction and nonfiction. The Subjective Norm and Intention are both significantly higher for fiction than for nonfiction.

Teachers' attitudes toward reading promotion for fiction and nonfiction (Chapter 4, study 3)

This study revealed that for both the reading promotion of fiction and of nonfiction, the best-fitting model is one in which Cognition has a direct path onto Intentions.

Furthermore, we discovered that, except for behavior, for teachers in primary education there are separate sets of constructs for promoting the reading of fiction and of nonfiction. This means that teachers who like to promote the reading of fiction do not necessarily like to promote the reading of nonfiction as well. In the structural model, for both fiction and nonfiction, Affect constructs have the strongest standardized paths on their respective Intention constructs, followed by Subjective Norm. In the model fitted for Study 2 (Chapter 3), which only contains constructs regarding the reading promotion of fiction, these two constructs also showed the highest loadings on Intention although Subjective Norm had a slightly higher loading than Affect. Cognition and PBC for both fiction and

nonfiction do not show significant paths on both Intention constructs. In short, this means that for both fiction and nonfiction, teachers intend to perform more reading promotion when they enjoy doing it and when they believe it is their moral duty; the perceived usefulness and ease of promoting reading does not influence the intention to do so. A result worth noting is that for both fiction and nonfiction, the perceived ease or difficulty of performing reading promotion (PBC) does not significantly predict the Intentions, but that both PBC-fiction and PBC-nonfiction do significantly and strongly predict actual behavior. This means that teachers are affected by whether they experience the ability to perform reading promotion, but this does not seem to influence their Intentions to perform reading promotion in the near future.

The difference between the fiction and the nonfiction part of the model was found in both paths from Intention to Behavior. The means that the Intention to perform reading promotion is almost equal for fiction and nonfiction. However, for nonfiction, the Intention to act out reading promotion does not seem to influence Behavior. For fiction, the path is significant and very large; for nonfiction, the path is small and non-significant. There are several possible explanations for this difference in paths. One explanation might be that promoting nonfiction texts is not part of the regular behavioral repertoire. This may be triggered by the fact that, in primary education, the reading of nonfiction texts like, for instance, history, biology and geography, is part of the everyday curriculum. Also, lack of behavioral control is a plausible explanation. PBC shows a strong path to Behavior but not to Intentions. Part of PBC concerns the availability of texts. Informational texts for leisure reading can be scarce in elementary school (Ness, 2011). However, the components stemming from Study 1 (Chapter 2), show both fiction and nonfiction activities clustering in one component. This makes it quite difficult to interpret the differences in paths from Intention to Behavior.

Students' attitude towards reading fiction and nonfiction texts (Study 4, Chapter 5)

The last study of this thesis showed that the MPB is an adequate model for the data regarding 5th and 6th grade students' reading of fiction and nonfiction. In students' minds, the MPB constructs differ regarding whether they refer to the reading of fiction or nonfiction. For instance, students who like to read fiction (Affect) might not like to read nonfiction. Similarly, a student who believes reading fiction is beneficial for educational success (Cognition) is not necessarily also convinced that reading nonfiction is also beneficial for educational success. There

is one exception to this differentiation: students who indicate they do not have the opportunity (PBC) to read fiction in their spare time, also indicate they do not have the opportunity to read nonfiction in their spare time. Given the perfect correlation in the structural model between PBC fiction and PBC nonfiction, for the students we may regard PBC as one construct regardless of the type of reading material.

Another noticeable result of this study is that it reveals that PBC appears to be an important determinant of actual reading behavior. It appears to be even more important than the student's Intentions to read in his or her spare time in the near future. So, to stimulate student reading, opportunities for reading must be increased.

For students, as for teachers, a model in which, for fiction and nonfiction respectively, Cognition constructs load directly on their Intention constructs (Triandis) fits better. This leads to a preference for the less parsimonious Triandis version of the model. In this model, the paths from Cognition on Intention for both fiction and nonfiction are negative and significant. However, for students, as was the case for teachers, inspection of the zero order correlations in this study, which are significant and positive, shows that in the Triandis version, the paths from Cognition on Intention should be interpreted as suppressor effects. The same applies to the path of Intention fiction on the reading of children's novels. The zero-order correlation is significant and substantial (.375), while the path between both constructs in the Triandis model is not even significant.

Overall conclusions

The finding of the clustering of different types of reading promotion behavior into components implies we can distinguish different types of teachers and teaching when it comes to reading promotion. For instance, teachers who take part in national programs with their students are not necessarily promoting the use of digital media. At the same time, we find that the different clusters of reading promotion behavior do share a fair amount of common variance, so we may also speak of teachers who, to a greater or lesser degree, are overall reading promoters.

Inspecting the correlations between reading promotion behavior and teacher and class characteristics, we find small but significant and noticeable results. It appears that teachers do not promote reading more in classes that need it the most. They also appear to perform activities that require little or no preparation more often. Given the task load of teachers, when it comes to reading promotion, it is preferable to offer it readymade.

Another conclusion of this thesis is that the MPB can be used to predict the reading promotion behavior of 5th and 6th grade teachers. We may therefore use the model to hypothesize on which aspects an intervention should focus to encourage teachers to perform more reading promotion. We conclude that if the goal is to stimulate reading promotion behavior, interventions aimed at both teachers' Affect and Subjective Norm toward reading promotion appear to be the most promising.

This research also shows that in the minds of teachers, promoting the reading of fiction and of nonfiction are two different things, which also implies that there are teachers who promote one more than the other. Results show that teachers believe that promoting the reading nonfiction is more important than promoting the reading of fiction, but results also indicate that teachers enjoy promoting fiction more than promoting nonfiction and that they believe they are morally more obliged to do so. Furthermore on average, teachers' intention to perform reading promotion is higher for fiction than for nonfiction. The question is why is it that teachers do not think that what is important is also morally fairer and should be promoted more. Perhaps teachers believe that reading nonfiction is sufficiently covered by subjects like history and geography. However, the fact that teachers indicate they tend to promote fiction more than nonfiction may also be due to tradition, as an essential part of cultural education, even though the attention to literature is very scarce or absent in training elementary school teachers.

We also find that on average, 5th and 6th grade teachers in the Netherlands have a positive attitude toward all constructs of the MPB. Nevertheless, substantial percentages of teachers score below the values indicative of a positive attitude, or do not think reading promotion is beneficial, fun to do, morally just, or feasible and do not intend to perform reading promotion activities in the near future

Discussion

Scientific Contributions of this study

Research into teacher behavior aimed at promoting reading is important if we want to understand the whole causal chain leading to students reading more or less. Nowadays, studies into reading promotion behavior of teachers are still scarce, although progress has been made in the last decade (e.g. De Naeghel, 2014a; De Naeghel, 2014b; Kozak & Martin Chang, 2019; Van Steelandt et al., 2022; Van Steelandt, 2020). The present study contributes to this progress and underscores the importance of investigating the role of teachers when looking into student leisure time reading behavior. It also provides the research with an instrument for measuring all aspects of the MPB in the area of teachers' reading promotion.

This study shows that the MPB can be used to predict teachers' reading promotion behavior and that it provides information about which aspects of the MPB could be targeted to enhance teachers' reading promotion behavior. Results show that for promoting the reading of both fiction and nonfiction, teachers' Affect and Subjective Norm best predict Intentions to perform reading promotion behavior. This thesis also shows that the same model can be used in research among elementary school students to obtain insights in how well the different MPB constructs predict their leisure reading. Results show that, while the MPB shows an adequate fit, the different MPB constructs do not predict student reading behavior well. We suppose this lack of predictive power might be partly explained by the age of the students involved.

Another interesting find in all MPB constructs measured, is that teachers make a distinction between reading promotion aimed at reading fiction and promotion aimed at reading nonfiction. Research into teachers' reading promotion behavior should take this distinction into account. Also, students appear to make the distinction between reading fiction and reading nonfiction and again, do so for all aspects measured as part of the MPB, except for PBC.

Limitations

There are some limitations to the studies presented in this thesis. First the measurement of teacher reading promotion behavior could be more specific in distinguishing between promotion behavior aimed at reading fiction and behavior aimed at reading nonfiction.

Second, the measurement of student reading behavior spans one week. It is likely that the measurement of student reading behavior will improve if we use log files over a longer period of times.

The third point of concern is the number of items we were required to remove to obtain a good model fit, particularly for the items intended to measure the MPB constructs for predicting teacher behavior concerning promoting the reading of fiction. Of course deleting items does not always mean items are not measuring the intended trait. Items that are very similar can also cause fit problems since the model will detect correlated error for these items. A replication could shed light on the degree to which the removal of fiction items has led to a capitalizing on chance

Methodological considerations with regard to interpretation

The model for predicting teacher behavior related to the promotion of the leisure reading of fiction, is fitted twice in the studies for this thesis, once only containing the constructs related to the promotion of the reading of fiction (Chapter 3) and once in a more elaborate model related to the promotion of both the reading of fiction and of nonfiction (Chapter 4). In both versions, the constructs concerning the promotion of fiction are based on the same data. When inspecting the structural part of the CFA on the constructs pertaining only to the promotion of the reading of fiction, we see that PBC shows no significant loading on behavior (standardized loading of .009). In the CFA on a model with both types of constructs, for the promotion of reading fiction and of reading nonfiction, the path between PBC fiction and behavior fiction is much larger and significant (.633). Since the same data are used for the fiction constructs of both models, the difference must be caused by adding the nonfiction constructs to the model. In the model concerning fiction and nonfiction, four constructs have a loading on behavior. In the more restricted model concerning only fiction, behavior is predicted by only two constructs. We maintain that multicollinearity causes the aforementioned difference, like in regular regression analyses. We conclude that interpreting a structural part of a CFA must be done, while we realize these paths might change when more constructs are added to a model. The results are thus less solid than one might think. Adding zero-order correlations to check the extent to which the paths differ, makes the results more accurate, though at the same time more ambiguous.

Another result that indicates a problem with multicollinearity in the models, concerns Cognition. For reading promotion of both fiction and nonfiction, the

best-fitting model is one in which Cognition has a direct path onto Intentions, following Triandis (1977). However, the Triandis model has a disadvantage in that it creates suppressor effects. The zero-order correlation of Cognition and Intentions is substantial and significant (.310), while in the Triandis model, the standardized path from Cognition on Intentions is non-significant (.020). Since this latter path is an estimate of the relationship between latent traits and thus without error, we should compare this coefficient with the zero-order correlation after correction for attenuation, which amounts to .524. Clearly, the interpretation of the estimated relationship between the constructs in the model is not easy and straightforward. It is also possible that the effect of Cognition on Intentions is not mediated through Affect, but through Subjective Norm. The hypothesis that an individual likes what is considered useful, is perhaps not appropriate in the domain of reading promotion in education. The relationship between the usefulness as experienced by teachers (Cognition) and Subjective Norm makes more sense perhaps. After all, in education what works is the norm.

Again, in the research into student leisure time reading behavior, the interpretation of the paths in the structural part of the Triandis model is problematic. The paths from Cognition on Intention should again be interpreted as suppressor effects. If Cognition is positively related to Intention when inspecting the zero-order correlation but shows a negative path to Intentions in the structural part of the Triandis model, then we should not conclude that Cognition has a negative effect on Intentions to read. The reversal of the sign is due to the relationship between Cognition and other predictors, e.g. Affect. So, in the Triandis model we have the problem that, although it fits significantly better than the original MPB as proposed by Ajzen and Fishbein, the loadings in the structural model may represent suppressor effects.

It seems that multicollinearity presents a problem in interpreting the structural part of the Triandis' models in this study. The conclusion is that the zero order correlations should always be inspected when interpreting the paths of a structural model.

Suggestions for future research

A first suggestion is to verify whether the loadings of the structural models presented in this thesis represent causal effects, as is hypothesized in the MPB. Qualitative research into the reasons why teachers behave as they do, might shed light on this question. Also, longitudinal research might provide insights into whether or not changes in behavior follow changes in other MPB constructs,

in order to establish which direction the causal chains run. To find out whether teacher behavior leads to the desired attitude and behavioral change of students, more research needs to be done into the effects of time spent on reading promotion in class. A second and third suggestion relate to the model we used. The second is to add the construct 'habit' to the MPB, as suggested by Triandis (1980), to verify whether the inclusion of habit in the MPB still improves the prediction of behavior, even for these young students who have had relatively little time to develop habits. The third is checking whether the suggested mediation of the effect of Cognition on Intention by Affect should be changed into a mediation of Affect over Subjective Norm in the context of reading promotion by teachers. It seems plausible that teachers believe that the norms in education are derived to a large extent from what is thought to be beneficial for students (Cognition).

Fourth, taking a longitudinal approach could verify trends in MPB constructs within students and trends in relationships between constructs in the model, also facilitating conclusions to be drawn about the direction of causality.

Our fifth suggestion is that experimental research into the effects of interventions aimed at enhancing the Subjective Norms or Affect of teachers, in order to enlarge the effects of Intentions on Behavior, might help in finding answers about causality.

Sixth: the path of PBC to the reading of children's novels should be delved into further. What exactly makes students read novels and what hinders their leisure time reading? Is it the number of books to which they have access? Is being unsure of which book to choose, perhaps a hindrance? Also, it could well be necessary to differentiate PBC into different subconstructs. PBC contains items related to very different control obstacles. For instance, lack of time is different from lack of money or lack of knowledge about what books are available. The somewhat miscellaneous nature of PBC items might also be the cause of the relatively low homogeneity of PBC constructs in our research.

Seventh: the adding of moderator effects could improve the prediction of behavior and offer new information about the differential effects of MPB constructs on Behavioral Intentions and students' leisure reading behavior or teachers' reading promotion behavior. For instance, the effect of Subjective Norm on Intentions might be different for students of different genders or social economic status.

Finally, our eighth recommendation is investigating the effects different forms of teachers' reading promotion behavior have on the reading behavior of their students.

Implications for educational practice

This thesis shows that there are many different activities that go under the heading of 'reading promotion'. Teachers need to be aware of and use the variety of available promotion activities. Also, teacher training colleges should give attention to these different options for reading promotion behavior. They should also differentiate between whether the promotion is aimed at reading fiction or non-fiction, particularly since the different fiction and nonfiction genres yield different learning outcomes for students. This is all the more important since it is conceivable that different types of students could respond to different types of reading promotion activities. Teachers can check for themselves the type of reading promotion they tend to use and the types of activity they might be able to use in future, so they please a wide variety of readers, enhancing their reading enjoyment and consequently their reading behavior and proficiency.

In all our studies, the means of the MPB constructs show that, on average, teachers have a positive attitude towards reading promotion; however, substantial proportions of teachers score below 4, which indicates a positive stance. When translating the results into advice for stimulating teachers to promote reading, convincing teachers of the moral imperative to promote reading seems most promising. Also, trying to find ways to increase the extent to which teachers like performing reading promotion in class seems promising. This knowledge should be integrated into teacher training programs.

In teachers' minds, the promotion of fiction and nonfiction texts in class involves different constructs and different inter-construct relationships. For educational practice, this implies that teachers and teacher trainers should be aware that both types of reading promotion require specific attention. If we want teachers to promote the reading of fiction and of nonfiction, attention should be given to facilitating (PBC) reading promotion, maybe even more so for the promotion of nonfiction, since the path from Intentions to Behavior is even non-significant for nonfiction, although the zero order correlations from Intention to Behavior, for promoting fiction and nonfiction respectively, are almost equal.

In addition, more attention can be directed at convincing teachers that reading promotion is most appropriate in classes where students read less, for instance, in classes with more boys than girls. Our results show us that, on average, teachers are slightly less inclined to perform reading promotion in classes that need it the most.

Our last study indicates that in students' minds, there is a difference between the reading of fiction and nonfiction texts. Distinguishing these types of reading

material in school could make a difference to the reading enjoyment of different kinds of students.

Because of the effect of PBC on students' behavior regarding reading fiction, teachers could check the availability of resources at home and school, and whether students have access to a library. In addition, teachers play an important role in strengthening their students' knowledge when it comes to picking appropriate reading material. Finally, the time and space teachers offer their students to read, and the provision of a rich literary environment, can help students to become fervent leisure time readers.

Of all the MPB constructs in the model, only PBC shows a substantial path to the reading of children's novels. The other MPB constructs do not predict student leisure time reading behavior very well. When inspecting the zero order correlations, one exception can be found. Here we find a significant and substantial correlation (.375) between the Intention to read fiction and the reading of children's novels. Why students so hardly ever act on their intentions, is an open question. If we assume that students might act more on their intentions when they grow older, stimulating the Intention to read seems useful. When we inspect how well the other MPB constructs predict both Intention constructs, we see that all paths are significant. We may therefore conclude that, to stimulate the Intention to read, all MPB constructs could be targeted. In particular, both Affect constructs predict both Intention constructs very well, so it seems wise to aim efforts at enlarging Affect. Also Subjective Norm seems potentially a wise choice to aim interventions at.

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Nederlandse samenvatting

Leesbevordering van fictie en non-fictie

Determinanten van leesbevorderingsgedrag van basisschoolleerkrachten en het lezen van hun leerlingen in de vrije tijd.

Inleiding

Goed kunnen lezen is van wezenlijk belang om goed te kunnen functioneren in de hedendaagse informatiemaatschappij (Sullivan & Brown, 2015). Het dagelijks werk bestaat voor velen een steeds groter deel uit het selecteren, interpreteren en evalueren van informatie; taken die door lezen geoefend kunnen worden, zowel op school als in de vrije tijd (Raukema, Schram & Stalpers, 2002). Leesvaardigheid is ook een belangrijke voorwaarde voor leren en studeren.

Lezen maakt slimmer en succesvoller, wie graag leest is over het algemeen taaliger en bijvoorbeeld een betere speller (Lindsay, 2010; Mol & Bus, 2011; Mullis et al., 2017). Veel lezen is een voorwaarde voor het ontwikkelen van leesvaardigheid. Het draait hierbij niet alleen om het lezen van fictie, maar ook om het lezen van non-fictie. Lezen in de vrije tijd blijkt daarbij een sleutel tot succes in geletterdheid en taalvaardigheid (Mol & Bus, 2011). Omdat goede lezers waarschijnlijk meer plezier beleven aan het lezen, kiezen ze om vaker te lezen. Op die manier neemt hun leesvaardigheid nog sterker toe, breidt hun woordenschat zich uit en wordt hun begrip van leesvaardigheid groter, waardoor het lezen nog makkelijker en leuker wordt (Kush, Watkins & Brookhart, 2005; Cunningham et al., 1994).

Een positieve leesattitude is dus van belang, maar deze is niet alle lezers gegeven. Om een positieve leesattitude te krijgen en vaker te gaan lezen, dient het lezen gestimuleerd te worden. Scholen hebben daar de middelen voor en de opdracht toe. Zo is deze opdracht terug te zien in kerndoel 9 voor het basisonderwijs, dat luidt dat leerlingen 'plezier krijgen in het lezen en schrijven van voor hen bestemde verhalen, gedichten en informatieve teksten' (SLO, 2011).

Hoeveel lezen Nederlandse leerlingen buiten school en hoe leuk vinden ze lezen? In het PPOON-onderzoeksverslag (Periodieke peiling van het onderwijsniveau, uitgevoerd door Cito) van 2007 wordt al aangegeven dat het enthousiasme van basisschoolleerlingen voor lezen sinds 1993 achteruit gaat (Heesters et al., 2007). Van Elsacker en Verhoeven (2003) vonden een afname van leesmotivatie en lezen in de vrije tijd in groep 5 en 6. Nederlandse leerlingen blijken zelfs

minder interesse in lezen te hebben dan leeftijdgenoten uit andere landen. De Gloppe en Otter (1993) zagen in hun internationaal vergelijkend onderzoek IEA (International Association for the Evaluation of Educational Achievement) dat negen jaar oude Nederlandse leerlingen aangaven minder te lezen in hun vrije tijd dan hun leeftijdgenootjes in andere landen, die beter presteerden op leesvaardigheid. Verder is in het vervolg op de IEA studie (Progress in International Reading Literacy Study of PIRLS) uit 2007 (Mullis et al., 2007) te lezen dat in Nederland de groep basisschoolleerlingen die thuis nooit een boek leest relatief groot is (42% versus internationaal 32%). De laatste PIRLS-metingen (groep 6) (Gubbels et al., 2019) laten zien dat de positie van Nederlandse leerlingen door de jaren heen daalt.

We zien dus dat Nederlandse leerlingen een niet erg positieve leesattitude hebben en weinig lezen, zowel op school als thuis. Daarnaast blijkt dat nieuwe generaties een nog minder positieve attitude hebben en nog minder lezen dan de generaties daarvoor en dat leerlingen steeds minder lezen naarmate ze ouder worden (Gubbels et al., 2017; Clark & Rumbold, 2006; Van Schooten, 2005). Het is dus belangrijk om uit te zoeken hoe de kwaliteit en de kwantiteit van het lezen kunnen worden bevorderd. Daarbij dient de aandacht vooral uit te gaan naar de leesbevorderende activiteiten van leerkrachten in het basisonderwijs. Leesbevordering maakt immers deel uit van hun taken en er is alle reden om aan te nemen dat zij kunnen bijdragen aan een positieve leesattitude van hun leerlingen. Tegelijkertijd weten we niet of nauwelijks wat leerkrachten aan leesbevordering doen en door welke factoren hun leesbevorderend gedrag wordt bepaald.

Doel van de dissertatie

Het doel van deze dissertatie is dan ook om inzicht te krijgen in de leesbevorderende activiteiten van leerkrachten in groep 7 en 8 in het basisonderwijs in Nederland, zowel voor fictieteksten als non-fictieteksten, en in welke mate leerkracht- of klaskenmerken verbonden zijn aan dit leesbevorderend gedrag. Het doel is ook om inzicht te krijgen in de cognitieve, affectieve en gedragsmatige factoren die op deze activiteiten van invloed zijn. Verder gaat dit proefschrift over het vrijetijdslezen van fictie en non-fictie van Nederlandse leerlingen in groep 7 en 8 en de determinanten daarvan. De studies die in dit proefschrift worden beschreven, zijn bedoeld om het gebrek aan kennis te verkleinen over de houding van leerkrachten ten opzichte van leesbevordering, over hun leesbevorderend gedrag en over de leesattitude en het leesgedrag van leerlingen in hun vrije tijd. Op basis daarvan formuleren we adviezen voor de praktijk.

In dit onderzoek is gebruik gemaakt van het Model of Planned Behavior (MPB), een attitudemodel (Ajzen & Fishbein, 1980; Ajzen, 1985) dat de constructen in kaart brengt die volgens de attitudetheorie het gedrag beïnvloeden. In dit onderzoek is dat gedrag het al dan niet uitvoeren van leesbevorderende activiteiten door leerkrachten in groep 7 en 8 in Nederland en het al dan niet lezen in de vrije tijd door leerlingen in groep 7 en 8 in Nederland. Het attitudemodel MPB veronderstelt dat de Intentie om bepaald Gedrag uit te voeren, van invloed is op het daadwerkelijk vertoonde gedrag. Volgens het MPB wordt de Intentie op haar beurt beïnvloed door drie andere constructen: Affect, Subjectieve Norm en Perceived Behavioral Control (PBC). Daarnaast wordt in het model het begrip Cognitie onderscheiden. Cognitie is gedefinieerd als de veronderstelde gevolgen van het gedrag in kwestie en de evaluatie (positief of negatief) van die gevolgen. Affect betreft de gevoelens die men heeft aangaande het beoogde gedrag. De Subjectieve Norm betreft de persoonlijke norm ten aanzien van het uitvoeren van het beoogde gedrag. Met PBC wordt de mate bedoeld waarin men zichzelf in staat acht om het beoogde gedrag uit te voeren. In de originele versie van het MPB wordt verondersteld dat het effect van Cognitie op de Intentie wordt gemedieerd door Affect. Triandis (1977) stelde later een wijziging in het MPB voor, waarin er een directe relatie tussen Cognitie en Intentie wordt verondersteld. Hier gaan we verder op in.

Onderzoeksvragen

In het onderhavige proefschrift proberen we verschillende onderzoeksvragen te beantwoorden. Ten eerste de vraag welke leesbevorderingsactiviteiten Nederlandse basisschoolleerkrachten met welke frequentie verrichten in groep 7 en 8. Daarnaast gaan we na of er in leesbevorderende activiteiten verschillende categorieën zijn te onderscheiden. Dat zou namelijk impliceren dat er op het gebied van leesbevorderend gedrag ook verschillende typen leerkrachten zijn te onderscheiden. De derde vraag die we beantwoorden is of de frequentie van uitvoeren van leesbevorderende activiteiten samenhangt met klas- en leerkrachtenkenmerken. In hoeverre het MPB past bij de gevonden leerkrachtdata is de volgende vraag die wordt gesteld. Daarbij kijken we tevens welk model de voorkeur verdient, het originele MPB of de versie van Triandis. Na vaststellen van het te hanteren model, is nagegaan in welke mate de constructen van het MPB het leesbevorderend gedrag van leerkrachten voorspellen.

Er is al geruime tijd een toenemende roep om de promotie van lezen niet te beperken tot fictie, maar ook aandacht te besteden aan non-fictie (Santa, et al.,

2000; Reutzell & Gali, 1998). Onduidelijk is echter of leerkrachten onderscheid maken tussen beide typen teksten bij het bevorderen van het lezen van hun leerlingen. De volgende vraag is daarom of in de hoofden van leerkrachten de constructen van het MPB afzonderlijke constructen voor fictie en non-fictie betreffen, of dat zij het bevorderen van deze beide typen teksten als een en hetzelfde ding zien. Met andere woorden, we beantwoorden de vraag of het bevorderen van het lezen van fictie en non-fictie twee verschillende kwesties zijn in de hoofden van leerkrachten. Vervolgens gaan we weer na hoe goed de verschillende constructen van het MPB het uiteindelijke leesbevorderende gedrag voorspellen voor fictie en non-fictie.

In het laatste deel van onze studie richten we de aandacht op de leerlingen. Ook bij hen zijn vragenlijsten afgenomen om het MPB te operationaliseren, maar nu gericht op lezen in de vrije tijd. Eerst gaan we weer na of het MPB past bij de data, of we hierbij de originele MPB-versie moeten hanteren of de versie van Triandis, en of we in de modelconstructen onderscheid moeten maken tussen het lezen van fictie en het lezen van non-fictie. We gaan dus na of ook in de hoofden van de leerlingen de constructen van het MPB voor het lezen van fictie en non-fictie verschillen dan wel gelijk zijn.

Steekproeven

Voor het onderzoek zijn drie verschillende datasets gebruikt. Eén set, bedoeld om representatief te zijn voor alle Nederlandse basisscholen, is gebaseerd op de respons op een vragenlijst uitgezet bij een uit alle basisscholen van Nederland aselekt getrokken steekproef van honderd scholen. Dit resulteerde in gegevens van 85 leerkrachten van groep 7 en 8 van 69 scholen (op schoolniveau een respons van 69%). Om na te gaan of de uitval de representativiteit van de steekproef aantast, is gekeken of de responderende scholen afwijken van de overige basisscholen in Nederland op enkele schoolkenmerken die de Nederlandse overheid publiek beschikbaar stelt (gemiddelde sociaal economische status van de leerlingen, vestigingsplaats school, denominatie school en schoolgrootte). Voor geen van deze variabelen wijkt de steekproef significant af van de niet deelnemende basisscholen.

Voor de tweede set werden deze vragenlijstgegevens van 85 leerkrachten aangevuld met gegevens van een selecte steekproef van 109 leerkrachten om de power van de analyses te vergroten en een antwoord mogelijk te maken op theoretische vragen over relaties tussen de constructen van MPB.

De derde set bestaat uit antwoorden op vragenlijsten uitgezet bij een gelegen-

heidssteekproef van 994 leerlingen afkomstig van 29 verschillende basisscholen. Deze leerlingen hielden tevens een week een logboek bij over hun leesgedrag in hun vrije tijd.

Instrumenten en analyses

De vragenlijst voor leesbevorderend gedrag van leerkrachten is gebaseerd op interviews met leerkrachten en beleidsmakers en documentanalyses. De items, geformuleerd voor het meten van de constructen van het MPB, bestaan uit stellingen waarbij respondenten op vijf-punt Likertschalen ('helemaal niet mee eens' tot 'helemaal mee eens') kunnen aangeven in hoeverre een stelling op hen van toepassing is. Voor elk MPB construct zijn zowel items over het lezen van fictie als van non-fictie geformuleerd. Een uitzondering op het bovenstaande vormen gedragsitems waarbij leerkrachten alleen konden aangeven of ze iets wel of niet deden (dichotoom).

Ook bij de leerlingen gebruikten we stellingen met Likertschalen voor het meten van het leesgedrag en de andere constructen van het MPB. Daarnaast vulden de leerlingen logboeken over hun leesgedrag thuis in.

Voor zowel leerkrachten als leerlingen zijn ook vragen over persoonlijke kenmerken opgenomen. Bij leerkrachten is tevens gevraagd naar klaskenmerken.

Om na te gaan of er categorieën van leesbevorderend gedrag te onderscheiden zijn en zo ja welke, hebben we een principale componentenanalyse (PCA) uitgevoerd op de items die zijn beantwoord aan de hand van Likertschalen. Op basis van de uitkomsten van de PCA konden clusters van items worden onderscheiden. Voor elk van de clusters zijn somscores gemaakt, mits de betrouwbaarheid (Cronbach's alpha) van deze som voldoende hoog bleek ($> .60$). De mate van leesbevorderend gedrag is zowel per item als voor de clusters bepaald met rechte tellingen.

Modelfits zijn bepaald met behulp van toetsende factoranalyses (CFA). Omdat de itemscores categorisch zijn (Likert-schalen 1-5), is hierbij de fit van modellen bepaald met WLSMV (Weighted Least Square Means and Variance adjusted). De gebruikelijke fit-indices werden gehanteerd om de modelfit te evalueren (Chikwadraat, RMSEA, GFI, TLI). Verschillen in modelfit van geneste modellen zijn getest met de optie difftest in Mplus. Er zijn zero-order correlaties berekend om suppressor-effecten in de structurele modellen te detecteren. Op basis van modelfit zijn per construct somscores gemaakt. De betrouwbaarheid van deze somscores is bepaald met Cronbach's alpha. Verschillen tussen somscores zijn getest door middel van onafhankelijke t-toetsen.

Ook bij de leerlingen zijn modellen gefit (CFA), waarbij dezelfde hierboven genoemde fitindices zijn gebruikt. Voor de leerlinggegevens is de vergelijking van de fit van geneste modellen ook verricht met behulp van andere fit-indices dan de Chi-kwadraat. Dit is van belang, aangezien de steekproef van leerlingen veel groter is dan de steekproef van leerkrachten, waardoor de power van de chikwadraattoets om geneste modellen te vergelijken erg groot is. Daarom gebruikten we ook de Root Deterioration per Restriction (RDR), het verschil in de Expected Cross Validation Index (ECVI) en het CFI-verschil (Dudgeon, 2003).

Resultaten

De clustering van verschillende typen leesbevorderingsgedrag in componenten (uitkomst PCA) impliceert dat we verschillende typen leerkrachten en onderwijs kunnen onderscheiden voor wat betreft leesbevordering. Tegelijkertijd hebben de verschillende clusters van leesbevorderingsgedrag een behoorlijke mate van gemeenschappelijke variantie, dus kunnen we ook spreken van leerkrachten die over het algemeen in meer of mindere mate leesbevorderaars zijn.

Als we de correlaties tussen clusters van leesbevorderend gedrag en leerkrachten- en klaskenmerken analyseren, zien we dat leerkrachten iets vaker leesbevorderende activiteiten verrichten als er meer meisjes in de klas zitten. Ook blijken ze vaker leesbevorderingsactiviteiten uit te voeren die weinig of geen voorbereiding vergen.

Een andere conclusie van het onderzoek in dit proefschrift is dat het MPB kan worden gebruikt om het leesbevorderingsgedrag van leerkrachten in groep 7 en 8 te voorspellen en dat het Triandis-model beter past dan het originele MPB. Echter, het Triandis-model blijkt voor Cognitie een suppressor effect te genereren. Mogelijk moet het effect van Cognitie op Intentie via een andere variabele gemedieerd worden. Hierbij lijkt de Subjectieve Norm een mogelijke kandidaat. In het onderwijs is het immers plausibel dat wat nuttig is voor de leerlingen de Norm bepaalt, en minder voor de hand liggend dat Cognitie Affect bepaalt.

De uitkomsten van de CFA zijn vervolgens gebruikt om verwachtingen te formuleren over welk type interventies het succesvolst lijken om het leesbevorderende gedrag van leerkrachten te bevorderen. We concluderen dat interventies gericht op zowel het Affect als de Subjectieve Norm van leerkrachten het meest kansrijk lijken voor het stimuleren van leesbevorderend gedrag van leerkrachten.

Dit onderzoek toont ook aan dat in de hoofden van leerkrachten het bevorderen van het lezen van fictie en van non-fictie twee verschillende dingen zijn. Dat impliceert dat er leerkrachten zijn die het ene meer promoten dan het andere.

De resultaten laten zien dat men het bevorderen van het lezen van non-fictie nuttiger vindt (Cognitie) dan het bevorderen van het lezen van fictie. Op alle andere aspecten van het MPB scoren leerkrachten voor de fictie variant van een construct hoger dan voor de non-fictie variant. Het bevorderen van fictie wordt gezien als leuker, moreel noodzakelijker en makkelijker uit te voeren. Verder hebben leerkrachten gemiddeld ook een hogere intentie om het lezen van fictie te promoten dan van non-fictie.

De vraag die dit oproept is waarom leerkrachten niet vinden dat wat belangrijk is (non-fictie) ook moreel wenselijker is en meer gepromoot zou moeten worden. Wellicht vinden leerkrachten dat het lezen van non-fictie op school voldoende aan bod komt in vakken als geschiedenis en aardrijkskunde. Aan de andere kant kan het feit dat leerkrachten aangeven meer fictie dan non-fictie te willen promoten ook komen door traditie, bijvoorbeeld omdat zij fictie zien als essentieel onderdeel van cultuureducatie.

Ook vinden we dat Nederlandse leerkrachten van groep 7 en 8 gemiddeld positief staan tegenover alle constructen van het MPB. Niettemin scoort nog een aanzienlijk deel van de leerkrachten onder de waarde die duidt op een positieve houding, wat aangeeft dat er nog veel ruimte voor verbetering is.

Uit de analyse van de leerlingdata blijkt dat leerlingen het lezen van fictie en non-fictie als gescheiden activiteiten zien. Ook alle andere constructen van het MPB dienen te worden gesplitst in een versie voor fictie en een versie voor non-fictie, met uitzondering van PBC. Het gemak waarmee leerlingen denken het lezen in de vrije tijd te kunnen realiseren, blijkt een en hetzelfde voor fictie en non-fictie. Van alle MPB-constructen blijkt zowel voor fictie als non-fictie Affect de sterkste voorspeller van het leesgedrag van de leerlingen in hun vrije tijd. De paden in het structureel model van Subjectieve Norm en PBC enerzijds en Gedrag en Intentie anderzijds zijn wel significant, maar veel kleiner.

Ook bij de data voor het leesgedrag van leerlingen blijkt dat het Triandis-model beter past dan het traditionele MPB. Hierbij treden wel, net als bij het Triandis-model voor leesbevorderend gedrag van leraren, suppressor effecten op, waarmee de vraag ontstaat of Cognitie toch niet gemedieerd moet worden door bijvoorbeeld Subjectieve Norm. Het is aannemelijk dat ook voor leerlingen geldt dat de norm beïnvloed wordt door vermeend nut in plaats van door de mate waarin men het lezen leuk vindt.

Discussie

Dit proefschrift laat zien dat er veel verschillende activiteiten zijn die onder de noemer 'leesbevordering' vallen. Het is raadzaam om leerkrachten een verscheidenheid aan beschikbare promotieactiviteiten te laten zien en hen deze te laten gebruiken. Ook de lerarenopleidingen zouden aandacht moeten besteden aan verschillende mogelijkheden voor leesbevordering.

In ons onderzoek laten de gemiddelden van de MPB-constructen zien dat leerkrachten gemiddeld genomen een positieve houding hebben ten opzichte van leesbevordering, maar ook dat een aanzienlijk deel van de leerkrachten lager scoort dan 4 (mee eens). Deze groep scoort dus onder het schaalpunt dat wijst op een positieve houding. Bij het vertalen van de resultaten naar adviezen om leerkrachten meer leesbevorderend gedrag te laten vertonen, lijkt het overtuigen van leerkrachten van de morele imperatief om lezen te bevorderen het meest kansrijk. Ook lijkt het veelbelovend om te proberen manieren te vinden om de mate waarin leerkrachten het leuk vinden om zelf leesbevordering in de klas uit te voeren, te vergroten. Deze kennis moet worden geïntegreerd in de lerarenopleidingen.

Alle constructen van het MPB blijken in de hoofden van leerkrachten iets anders te betekenen afhankelijk van of ze over het bevorderen van fictie of van non-fictie gaan. Voor de onderwijspraktijk betekent dit dat leerkrachten en lerarenopleiders zich ervan bewust moeten zijn dat beide vormen van leesbevordering specifieke aandacht behoeven.

Onze resultaten laten zien dat leerkrachten gemiddeld iets meer geneigd zijn om aan leesbevordering te doen in klassen met meer meisjes. Er kan, gezien dit resultaat, meer aandacht worden besteed aan het overtuigen van leerkrachten dat leesbevordering het hardst nodig is in klassen waar leerlingen juist minder lezen, bijvoorbeeld in klassen met meer jongens dan meisjes.

Het onderzoek onder leerlingen laat zien dat er in de hoofden van leerlingen een verschil is tussen het lezen van fictie- en van non-fictie in hun vrije tijd. Het onderscheiden van dit soort leesmateriaal op school en het aandacht geven aan beide typen tekst kan een verschil maken voor het leesplezier van verschillende typen leerlingen.

Vanwege het relatief grote effect van PBC op het gedrag van leerlingen met betrekking tot het lezen van jeugdliteratuur (in de modellen: 'children's novels'), adviseren we leerkrachten om rekening te houden met de beschikbaarheid van jeugdliteratuur thuis en op school en ook om na te gaan of leerlingen toegang hebben tot een bibliotheek. Daarnaast spelen leerkrachten een belangrijke rol bij het versterken van de kennis van hun leerlingen als het gaat om het kiezen van geschikt leesmateriaal.

Van alle MPB-constructen in het model laat alleen PBC een substantieel pad zien naar het lezen van jeugdliteratuur. De andere MPB-constructen voorspellen het leesgedrag in de vrije tijd van leerlingen niet zo goed. Intentie wordt daarentegen goed voorspeld. Waarom de relatie tussen Intentie en Gedrag van leerlingen in het model relatief zwak is, is een open vraag. Als we aannemen dat leerlingen naarmate ze ouder worden wellicht meer naar hun intenties handelen, lijkt het stimuleren van de Intentie om te lezen nuttig. Als we kijken hoe goed de andere MPB-constructen beide Intentie-constructen voorspellen (fictie en non-fictie), zien we dat voor beide type teksten Affect Intentie het best voorspelt, daarna Subjectieve Norm en PBC vertoont een relatief klein effect op intentie. In het hier gerapporteerde onderzoek hebben we leerlingen een week lang een leeslogboek bij laten houden. Het is mogelijk dat een langduriger meting van leesgedrag een betere indicator geeft van hoeveel leerlingen lezen en dat daardoor gedrag beter door intenties voorspeld wordt.

In lijn met het visiestuk van de kennistafel Effectief Leesonderwijs (Scheltinga et al., 2021) en het Leesoffensief (Raad voor Cultuur, 2020) is het volgens ons van groot belang om in het onderwijs ideeën in de praktijk te brengen die hun basis vinden in wetenschappelijk onderzoek. Met deze dissertatiestudie hebben we de wetenschappelijke basis voor beleid ten aanzien van leesbevordering verbreed.

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Short Biography

Marlon Ruwette was born on December 14, 1982, in Haelen, the Netherlands. She completed her secondary education in 2001 at Sint Ursula in Horn. In 2005 she obtained her Bachelor of Arts degree in Dutch Language and Culture at Leiden University. In September 2007 she completed her Master in European Culture at University College London. In August 2008 she completed the propedeuse of the Design Academy Eindhoven. In January 2010 she obtained her teacher training Master at Leiden University.

In May 2012, Marlon started as a PhD candidate at the University of Groningen, in collaboration with Rotterdam University of Applied Sciences. Her research project concerned the reading promotion of fiction and nonfiction texts of teachers grade 5 and 6 in the Netherlands. The project also focused on students' leisure time reading.

At Rotterdam University of Applied Sciences she works both as lecturer of language teaching pedagogy for the School of Education and a researcher at the Research Centre Urban Talent.

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