How parental motivation and self-regulation contribute to the decoding efficiency of children in grade 1

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Abstract

There are concerns in the Netherlands about the decreased reading level of young people. Therefore, research on environmental factors and child-specific factors is needed to identify potential risk factors for reading difficulties in children. In this study, the relationship between parental motivation, self-regulation of the child and decoding efficiency was examined. Previous research indicated that parental motivation and self-regulation play a role in predicting reading skills, but their specific impact on early reading development remained unclear. Additionally, child self-regulation was suggested to influence the effectiveness of parental contributions to reading.

The study involved Grade 1 students (n=58) and their parents, who completed questionnaires assessing the students' self-regulation and parental motivation. The students underwent a nationally standardized decoding efficiency test. Despite previous research suggesting predictive relationships, the findings did not show significant associations between parental motivation, child self-regulation, and decoding efficiency.

These non-significant results indicate the need for further exploration of this subject. These findings contribute to the ongoing discussion surrounding the complex nature of reading skills and provide insights for future research in this field.

Keywords: word decoding, decoding efficiency, parental influences, parental motivation, self-regulation.

Introduction

The ability to read is a fundamental skill that is crucial for success in school and in life (Arnbak, 2004). However, recent findings from the Education Inspectorate in The Netherlands have indicated that the reading skills of Dutch children are alarmingly low (Inspectie van het Onderwijs, 2022). Additionally, the recently released Progress in International Reading Literacy Study (PIRLS) results have shown a significant decrease in the reading skills and reading pleasure of Dutch ten-year-olds (Swart et al., 2023). This trend has led to concerns among teachers and parents, as it has the potential to impact the future success and well-being of these children (Arnbak, 2004). These findings further highlight the urgency to examine the factors contributing to this decline and identify potential risk factors for reading difficulties in children. The aim of this study is to examine the relationship between parental motivation, child self-regulation and decoding efficiency in grade 1 in order to understand the variation in reading skills and identify potential risk factors for reading difficulties in children.

The recent research by the Educational Inspectorate has shown that only half of the children in the Netherlands reach reading level 2F at the end of primary school, the minimum level to be able to participate in society (Inspectie van het Onderwijs, 2022). Adults with poor reading skills are more likely to have trouble understanding important information, for example medical advice from doctors (Weiss et al., 1995) In contrast, individuals with strong reading skills are more likely to be employed and earn higher salaries (Daggett, 2005), and they have better overall health outcomes (Weiss et al., 1991). Research into reading education in primary school is, therefore, of great societal relevance, as it has the potential to improve the lives of children both in the short and long term.

One of the first and main objectives for children who are learning how to read is to develop their accuracy and fluency in decoding words (Van Gorp et al., 2017). This means

that children learn that written graphemes correspond to spoken phonemes, which can be combined into words (Schaars et al., 2019). Word decoding is an important predictor for reading skills in later grades (Inoue et al., 2018; Perfetti, 2007). Perfetti (2007) and Ehri (2005) described it as a developmental path that children follow: it starts with decoding, which involves spelling out individual letters or letter combinations to form recognizable words, and when children can crack the code they become more and more fluent during practice until it is almost automatic and words can be recognized on sight. When words can be recognized on sight, pronunciation and meaning can be retrieved quickly from memory, which improves text comprehension (Ehri, 2005). As children progress in their reading development, they transition from the initial stage of Learning to Read to the subsequent stage of Reading to Learn, where they use their acquired reading skills to access and comprehend more complex texts, enabling them to expand their knowledge on various subjects (Harlaar et al., 2007). While the formal process of learning to read is predominantly centered in schools, the influence of parents on their children's reading abilities cannot be overlooked.

Parental influences

Research (e.g., Inoue, 2018; Sénéchal, 2006) showed that parents have an influence on their children's reading skills, including their early reading skills and their decoding efficiency. One of the ways this has been approached is the home literacy model. The home literacy model is a model proposed and extended by Sénéchal (2002; 2006). She argued that the things parents do to stimulate literacy can be divided into two categories. There are the code-related (formal) activities, in which parents directly involve children in learning to read, for example by teaching them the sound and name of specific letters. There are also the meaning-related (informal) activities, which mainly focus on the meaning that a text has, such as with storybook-reading (Sénéchal & LeFevre, 2002). This model was extended by

Inoue et al. (2018): their conclusions were that the formal activities predicted letter knowledge and phonological awareness in grade 1, and the informal activities predicted vocabulary and rapid naming speed. Both forms of activities contributed to reading accuracy and fluency, which led to better reading comprehension in later grades. This home literacy model provides important information about the role of parents in the process of learning to read: parents directly influence the child's reading skills and can stimulate this in specific ways (Sénéchal, 2006). The motivation of parents to be involved in reading related activities also seems to be a factor of importance in the home environment.

Sonnenschein and colleagues (2000) have investigated that children who grow up in a home where reading is seen as a form of entertainment have better reading skills than children who grow up in a home where parents consider reading to be an integral part of life or parents who merely want their kids to perform well at school. They also found that parents who consider reading to be a source of entertainment are more likely to encourage their children to do so as well (Sonnenschein et al., 2000). This is of relevance, because research by the Organization for Economic Co-operation and Development (OECD, 2002) has shown that reading enjoyment might even play a bigger role in educational success than a child's socio-economic status. While Sonnenschein et al. (2000) suggested that parental motivation to engage in reading-related activities with their child can impact reading ability of the children, it is unclear to what extent it affects specific components of reading ability, such as decoding efficiency. Additionally, the study primarily used qualitative rather than quantitative research methods, which gave insight into the concepts and experiences, but it limits the extent to which the findings can be generalized. Van Steensel (2006) argued that using both qualitative and quantitative research is essential for a comprehensive understanding of a construct: qualitative research uncovers motivations and subjective experiences, and quantitative research provides generalizable statements and identified

relationships. This study attempts to contribute to a more comprehensive understanding of parental motivation by conducting quantitative research. Although it is suggested that parental motivation can impact reading ability, it also matters how the child deals with that parental involvement: Sonnenschein et al. (2000) mentioned that not only the social environment provided by the parents plays a role in the ability to acquire reading skills, but also the cognitive abilities and characteristics of children are of importance.

Self-regulation

Self-regulated learning, or self-regulation, is "an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behavior, guided and constrained by their goals and the contextual features in the environment" (Pintrich, 2000, p. 453). Pintrich (2000) and Zimmerman and Schunk (2001) argued that self-regulation is the explanatory factor for the difference in achievement between students who have the same skills and abilities. Boekaerts (1999) suggested that self-regulation makes children more able to deal with the existing circumstances: if a student has a high self-regulation, they get more out of learning situations, because they relate new material to known information more quickly. The study by Xu et al. (2010) added that self-regulation and parental involvement reinforce each other: if children exhibit more self-regulation, it ensures that they can better use their parents' support and resources. Children with low self-regulation may find it more difficult to discuss school with their parents, so they do not benefit as much from having involved parents (Xu et al., 2010).

Cirino et al. (2017) argued that self-regulating behavior is important for learning to read because reading is a goal-directed behavior (e.g., extracting meaning or sounds from words) that requires effort. Self-regulation, therefore, is already important for children who are just learning to read, and it is a skill in which children can also differ at a young age (Cirino et al., 2017). Cirino and colleagues added that it is possible to promote the

development of self-regulation skills in students, even at the primary school level. This finding highlights the potential for educational interventions aimed at improving self-regulation in children.

Pintrich (2004) developed a model of self-regulated learning (SRL) that includes four distinct phases: forethought, planning and activation; monitoring; control; and reaction and reflection. The importance of understanding self-regulation lies in the potential to improve this ability in individuals, as Cirino et al. (2017) have shown to be possible.

Present study

Previous studies found that parental motivation and self-regulation both predict reading skills. However, it is unclear to what extent these parental and child efforts predict the early reading development of children during their very first steps in formal reading instruction (Grade 1; *Groep 3* in the Netherlands). In addition, research suggested that the way children are able to regulate their own learning might also relate to the effectiveness of parental contributions to learning to read. However, it remains unclear if and how these two factors interact in the prediction of word decoding skills. In other words, it is not clear if and how the self-regulation of the child might moderate the relation between parental motivation and the child's decoding efficiency in grade 1.

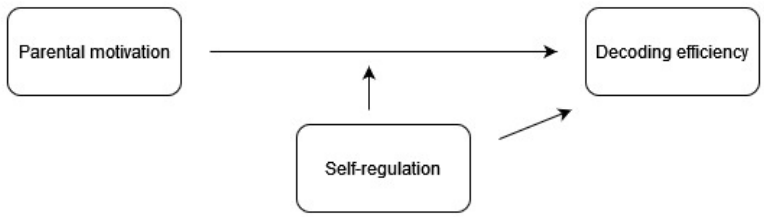
This leads to the following research question:

To what extent does parents' motivation influence their child's decoding efficiency in grade 1, and what role does self-regulation have in this relationship?

It was hypothesized (Figure 1) that parental motivation predicts the decoding efficiency of the child. It was further expected that self-regulation predicts the decoding efficiency of the child, and with regard to the moderation, it was expected that the motivation of the parents has more impact if children have more self-regulation.

Figure 1

Schematic representation of the conceptual research model



Methods

Research design

A quantitative survey research has been conducted to test the relationships between parental motivation, child's self-regulation and decoding efficiency. Parents have filled out a questionnaire about their motivation and the children answered a questionnaire about their self-regulation. This was compared to the scores the children achieved on a nationally standardized reading test.

Participants

To answer the research question, the research has been conducted on first graders (The Netherlands: *Groep 3,* age 6 or *7*) and their main caregiver, who was defined as the parent or carer who spends the most time with the child. In the Netherlands, the formal reading instruction starts in grade 1. Children learn to read and write short words and develop their skills towards reading longer words and sentences throughout the year (Van Til et al., 2018).

An estimation of the sample size was made using Magnusson's tool (n.d.), which calculated the required sample size considering the accepted type I and type II errors, as well as a small to medium effect size. According to the calculations, approximately 125 participants were deemed necessary to fulfill these requirements. However, during the actual implementation of the study, only 60 participants were recruited. The participants have been

found by means of a convenience sampling. In one participant the parent questionnaire had been lost and one participant was absent on the day of the test. This ensures that 58 parent-child duos completed both the parent questionnaire and the children's questionnaire completely. Although the current analyses can still be interpreted, this should be done with caution due to the small sample size and lower power.

The sample consisted of 26 boys and 32 girls. In nearly all families, with the exception of one, Dutch was the primary language spoken. This is not representative of the Dutch population, where 8.2 percent of the population speaks a language other than Dutch at home (Cornips, 2021). The socio-economic status (SES) of the sample was studied to gain insight into the characteristics of the sample. SES is operationalised by the educational level of the main caregiver. The educational levels were divided into three categories ((1)low, (2) intermediate and (3) high education level), following the Central Bureau of Statistics (Pleijers & De Vries, 2021). Regarding the educational background of the parents, 54 parents had the highest level of education, while 3 parents had intermediate education level and 1 parent had the lowest level of education. This cannot be compared with the rest of the population, because in the Netherlands 25 percent have achieved the highest level of education, 54 percent have secondary education and 21 percent have the lowest level of education (Cornips, 2021).

Instrumentation

Decoding efficiency

The Cito (Central Institute for Test Development) in the Netherlands has a major role in developing the standardized tests that are administered in primary education (Van Til et al., 2018). The Three Minute Test (DMT) is one of them. The decoding efficiency is tested by asking the students to read as many words as possible from a card within a certain time (Van Til et al., 2018). In first grade, two cards with 150 words each are used with the allotted time

of one minute per card. The words on the first card are easier to read and have a maximum of three letters (consonant-vowel-consonant), while the words on the second card are more difficult and can have up to six letters, which include consonant and vowel clusters (Van Til et al., 2018).

Cito reported reliability coefficients of 0.86 or higher, which is good (Field, 2018), and Cito demonstrates the validity of the test by extensively describing the procedure and theoretically substantiating the constructs and operationalization (Van Til et al., 2018). They also present high correlations with other tests that measure the same construct, which shows the convergent validity. This means the score of this test can be seen as a trustworthy indicator of the learner's decoding efficiency (Van Til et al., 2018). The words that are read correctly were added together, which makes for a total score number between 0 and 300 that indicates a student's decoding efficiency.

Parental motivation

The study aimed to assess parental motivation using a questionnaire based on the study by Sonnenschein et al. (2000). This questionnaire consists of eight statements that ask parents about the importance of specific activities related to their child's reading development. It is believed that this method is valid because it assesses parents' beliefs and attitudes towards reading education and their role in it, which can be indicative of their overall level of motivation and involvement in their child's learning.

An example statement from the questionnaire is: "I think it is important to encourage my child to pick out books about fictional characters that the child likes." The full questionnaire can be found in appendix A. Parents have been asked to rate each statement on a scale of 1 to 5, with 1 indicating that the statement is not important to them and 5 indicating that it is very important. The average rating for all 8 statements was calculated and used as an overall measure of parental motivation.

During the piloting phase of the parent questionnaire, a group of four parents were invited to provide feedback on its comprehensibility. The overall response indicated that the questionnaire was indeed understandable. However, based on the feedback received, question 8 was rephrased to make it more clear. The phrase 'sound-letter correspondences' was considered complicated and was replaced by 'which sounds belong to which letters'. The final questionnaire can be found in appendix B.

According to this questionnaire, the construct motivation consists of two sub-constructs: an entertainment perspective and a skills perspective. It was assumed that they separately measure part of motivation, but together form one main construct. This was checked using a confirmatory factor analysis. It was expected that a single factor solution would be identified, but the Principal Component Analysis yielded a two-factor solution based on the Kaiser Criterion (Field, 2018), explaining 58.50% of the variance. Questions 1, 3, and 7 exhibited higher loadings on the second factor. Despite this outcome, all questions were included as one factor in the final analysis. This decision was motivated by the absence of substantive reasons to distinguish between two factors: the questions that scored higher on factor 2 did not form a clear cluster, nor did they differ in subject from the other questions. It was also observed that all questions still exhibited factor loadings higher than 0.5 on factor 1, while the factor loadings on factor 2 were only slightly higher. According to Field (2018), factor loadings higher than 0.5 are considered acceptable. Consequently, in subsequent analyses, the parent questionnaire was treated as a single factor. The reliability was checked with a calculation of Cronbach's alpha. The alpha for this questionnaire was 0.75. This is considered an acceptable reliability (Field, 2018).

Self-regulation

The Children's Perceived use of Self-Regulated Learning Inventory (CP-SRL) is a questionnaire that measures self-regulated learning (SRL) using the components identified by

Pintrich (2004). The CP-SRL has acceptable to good reliability and validity, making it suitable for assessing SRL (Vandevelde, 2013; Field, 2018).

In order to make the questionnaire suitable for first graders, a selection of questions was made based on relevance to the main research question and the attention span of young children. Some questions (for example about doing homework) are not yet applicable in grade 1 and it was decided that approximately 10 to 15 questions regarding this subject were appropriate for the target group.

The CP-SRL uses statements, for example `I carry on until I finish my schoolwork`. The responses are categorized on a three-point scale: (1) almost never, (2) sometimes and (3) almost always. The children check the box that applies to them. To suit the target group, the boxes also have different colors. The average rating of all statements is calculated and used as an overall measure of self-regulation. The adjusted questionnaire can be found in appendix C.

The questionnaire was piloted in a first-grade class comprising 20 children. Two questions about forethought turned out to be difficult for respectively 8 and 9 out of the 20 children. These questions were rechecked and considered not suitable for the target group. Consequently, question 3 was excluded and question 2 was rephrased. One question (Q13) was removed from the questionnaire for the sake of the participants' attention span. In addition, the question's content was already covered in another question. (For the final questionnaire, see appendix D).

The Cronbach's alpha for this questionnaire was found questionable ($\alpha = 0.58$) (Field, 2018). Because the reliability only increases moderately when an item is removed and the original questionnaire did give a reliable result, all variables are included in the analysis.

Procedure

The parents of the children had to sign an informed consent form before they and their children participated in the study. Participants were informed beforehand how their personal

data was used and managed. The researchers explained the purpose of the research and what data will be collected, as well as the rights of the participant.

The decoding efficiency test was administered by the schools, as it is a standardized, nationwide test (Van Til et al., 2018). The schools administered the tests within the designated period of mid-January to mid-February. At this point in time, the students have learned all the letters and sounds that occur in Dutch orthography. The adjusted CP-SRL and the parental motivation questionnaire have been administered in April and May. Although that means there is a little timing discrepancy, the tests have been administered within a four month time frame and it is not expected that there will be any interpretable changes in the results during this interval. That means it is not expected that parents' responses on the motivational questionnaire or the children's answers on the CP-SRL will be impacted by the DMT score. The questionnaire for the parents was handed out on paper together with the informed consent form. The questionnaire for the children was administered with paper and pencil in class by the researchers.

Data analysis

After the data had been collected, the analyses were performed in SPSS to answer the research question. Prior to proceeding with the regression analysis, the assumptions of normality, linearity, multicollinearity and homoscedasticity were checked. A multiple regression analysis was performed with DMT as the outcome variable and parental motivation and the child's self-regulation as the independent variables. The interaction term between the two independent variables was also included to test the moderating effect of self-regulation.

All tests were conducted using a 95% confidence interval and the effect size in the regression analysis was assessed by examining the R-square. An R^2 of 0.01 was considered small, 0.09 as medium, and 0.25 as large, following the guidelines proposed by Field (2018).

Results

Descriptives

The data was searched for missing values, but none were found. Table 1 presents descriptive data and table 2 displays bivariate correlations. It can be seen that there is a wide variation in DMT score. The mean of the parental motivation questionnaire is quite high, and on the self-regulation scale, a greater number of children perceive themselves as having high self-regulation rather than low self-regulation. The correlation table shows that there is a non-significant tendency towards a negative relation between parental motivation and the child's self-report of regulation.

Table 1

Descriptives

Variable	*Mean*	*SD*	*Min*	*Max*
DMT	57.00	34.61	6	171
Parental Motivation scale	4.13	0.53	2.75	5.00
Self-regulation scale	2.26	0.28	1.67	3.00

Table 2

Bivariate correlations

	1.	2.	3.
1. DMT	---		
2. Parental motivation	.02	---	
3. Self-regulation	-.00	-.14	---

*. Correlation is significant on 0,05-level (two-tailed).

Assumptions of linear regression

To begin with, various assumptions were examined. A P-Plot was used to check for normality, which showed a reasonably normal distribution in the sample. To check for homoscedasticity, a scatter plot showed that the residuals were fairly evenly distributed, so the assumption was not violated. The Variance Inflation Factor is below 5 for all predictors, so multicollinearity is not an obstacle to performing the analyses. Some coherence between the variables was shown (see correlations in table 2) and it was clear from the data check that a relatively small sample was used. Although the assumptions for regression and moderation analyses have not been violated, the results should be interpreted with some caution.

Regression analysis

A multiple regression analysis was performed to investigate whether parental motivation and self-regulation predict the decoding efficiency of the child, and whether self-regulation moderates the relationship between parental motivation and decoding efficiency. The results can be seen in table 3.

The results of the study indicated that parental motivation was not a significant predictor of a child's decoding efficiency. The regression coefficient for parental motivation was -31.78 ($t(56) = .42$, $p = .68$). Similarly, self-regulation also did not emerge as a significant predictor, with a regression coefficient of 61.35 ($t(56) = 0.44$, $p = .66$). Furthermore, the moderation analysis revealed that the interaction term was not significant, as evidenced by a regression coefficient of -13,74 ($t(56) = - .42$, $p = .68$). The explained variance (R^2) of this insignificant model is .004.

Table 3

Regression model with interaction term

Model	B	Beta	t	p-value
(Constant)	-84.95		-.26	.80
Parental motivation	31.78	.49	.42	.68
Self-regulation	61.35	.50	.44	.66
Parental motivation * Self-regulation	-13.74	-.63	-.42	.68

Discussion

This study aimed to examine the effect of parents' motivation on their child's decoding efficiency in grade 1 and the role of children's self-regulation in this relationship.

Parental influences

This study found no significant relation between parental motivation and the decoding efficiency of children in grade 1. This means that the motivation parents have to engage in reading-related activities with their children is not related to their reading skills. Although little was known about this form of parental motivation, this is not in line with what was expected based on the literature about parental involvement. The role of parents is usually regarded as important in the process of learning to read. Inoue et al. (2018) expanded upon the home literacy model proposed by Sénéchal (2002; 2006). They found that formal activities at home were predictive of letter knowledge and phonological awareness in first grade, while informal activities were predictive of vocabulary and rapid naming speed. Both types of activities played a role in improving reading accuracy and fluency, ultimately leading to enhanced reading comprehension in subsequent grades. In this sample, the relationship between parents' motivation to do formal and informal activities with their children was not related to their decoding efficiency.

A reason for the difference between the conclusions found and the literature could be that the motivation from parents differs from their actual activities. As has been researched, intentions sometimes differ from actions: this is called the intention-behavior gap (Godin et al., 2005). The questionnaire asked parents about which reading-related activities they considered important to do with their children, but not whether they actually did them regularly. The average motivation of parents was high: parents seem to know very well what is good for the child's reading skills, but may not bring this in practice. For example, parents may find it important to encourage children to read books in their spare time, but in practice do so less than they intend.

Another possible explanation is that the school attended by the children effectively fulfills its role in facilitating reading development. Folkesson and Swalander (2007), who conducted research in grade 2, concluded that when schools compensate adequately for literacy-related activities, the influence of the home environment may diminish. It is possible that a similar scenario exists in this case, where the school or teacher's effectiveness in promoting reading skills outweighs the impact of parental motivation.

Furthermore, the construct validity of the questionnaire did not align with initial expectations. The factor analysis conducted on the questionnaire yielded inconclusive results regarding whether all the questions effectively measured the same underlying construct. Contrary to the anticipated outcome based on existing literature, no clear clusters or patterns emerged that could be substantively explained. This may also contribute to the differences between the literature and the research conducted.

Self-regulation

This study found no significant relation between self-regulation and the decoding efficiency of children in grade 1. This means that how children regulate their own learning does not always translate into their actual performance. This result is striking since it

contradicts the literature. Cirino et al. (2017) explained that self-regulation is important for children who are learning to read because reading is a goal-directed action, which requires effort and could therefore be improved with higher self-regulation. There are several potential factors to consider when explaining the difference between the literature and the current study. The first factor to consider is that self-regulation might not be as crucial in the first grade, given that a significant portion of learning activities are carried out in small steps within the classroom. Then the benefit that children derive from good self-regulation would only come later in life, when children have to commit themselves more independently to learning. For instance, when faced with the task of completing homework assignments, students can truly benefit from employing effective self-regulation techniques (Ramdass & Zimmerman, 2011). The second factor is the presence of various other influential factors that diminish the role of self-regulation in early reading skills. As discussed, reading ability is a complex construct on which many factors have an influence: for example genetics (Petrill et al., 2010) or other aspects of the literacy environment at home (Inoue et al., 2018), also have an important effect on early decoding efficiency. It is possible that these factors played a more important role in the sample, as a result of which the role of self-regulation was less apparent.

Questions could also be raised about the ability of the children to reflect on themselves. Vandevelde (2013) found the questionnaire suitable for young children, and Leigh (2020) also concluded that children aged 6 or 7 are quite capable of self-reflection, but it would be interesting to investigate to what extent the children's answers match with the judgment of their teachers or parents about the their self-regulation skills.

Another factor to consider is the potential limitations in the questionnaire's ability to fully measure the desired construct. An abbreviated version of the CP-SRL questionnaire was used to adapt to the age group and some items were rephrased. As a result, the reliability was

lower than the original CP-SRL. The lower reliability was weighed against overall value and validity of the questionnaire and it was decided to continue with the questionnaire with all items, but the lower reliability is something to consider when discussing the differences between the literature and the current study.

The last factor to recognize is the limited sample that was used in this study: fewer participants than planned were found, and the sample consisted primarily of highly educated, Dutch-speaking parents. This may have an effect on the relationship found: Troy et al. (2017) found that self-regulation is more important for lower socio-economic status environments due to limited access to resources and support systems. In such circumstances, children must rely on their own abilities to persevere, set goals, and learn effectively. The fact that mainly highly educated parents participated in this study may therefore contribute to the fact that the relationship was not found.

It was also hypothesized in this study that the motivation of the parents has more impact if children have more self-regulation. This was put forward by Xu et al. (2010), who suggested that self-regulation and parental involvement reinforce each other. Children who have high self-regulation can do more with the support their parents provide, while children with low self-regulation would find it more difficult to benefit from their parents' involvement. The moderation analysis also gave no significant result, so this cannot be confirmed.

An alternative explanation could be that children with high self-regulation may be self-sufficient and less reliant on parental support, as they are already capable of managing their own behaviors effectively. This could be attributed to their inherent high levels of motivation. Conversely, children with low self-regulation may benefit from the motivation provided by their parents. However, this perspective has not been extensively explored in existing literature, underscoring the need for further research.

Strengths and limitations of research

In the present study, several strong and weak points can be identified. One of the key strengths of this research is that it builds upon a range of existing studies and theories. This study explores perspectives and ideas from existing research, which helps gain a better overall understanding of the topic. Furthermore, the research introduces a conceptual model that addresses a previously unclear aspect, thus filling a gap in the current knowledge.

The decision to conduct this research in the Netherlands instead of English-speaking countries also holds significant value, as highlighted in Share's (2008) article. Share argued that English orthography poses unique challenges that have led to a narrow focus on oral reading accuracy in English-based reading research. Therefore, it is also important to add to the existing literature with a study that was conducted in the Netherlands where Dutch orthography is used, which is more transparent in nature (Seymour et al., 2003).

Another strength of this study is the inclusion of a pilot study. Conducting a pilot study allowed for the refinement of the instruments, ensuring that potential issues and challenges were identified and addressed before the main data collection.

A notable weakness of this study concerns the smaller than anticipated participant count. Despite extensive efforts to recruit an adequate sample, the final number fell short of the initial expectations. Recruiting participants for the study turned out to be more challenging than expected. In the future, researchers could try to approach the primary school teachers directly. In the end this turned out to be more effective than approaching the school.

With regard to recruitment, the initial plan to include schools from various regions across the Netherlands could not be fully realized. Instead, the study was confined to two schools located in the central region of the country. This limitation has implications for the statistical power of the analysis and restricts the generalizability of the results. Furthermore, it is worth noting that the sample primarily consisted of highly educated parents who were

proficient in Dutch, which is not in line with the actual distribution in society (Cornips, 2021). Although this makes it difficult to generalize the results, this study remains valuable as a starting point for further research: in future, replication with a more representative sample can build upon the current literature review and theoretical framework, and the current questionnaire that has been piloted on the age group. The parental questionnaire had never been used quantitatively before, but in this sample it has revealed satisfactory reliability. This marks an advancement toward quantifying this aspect of parental involvement.

It is also interesting to gain insight into the perspectives and experiences of this particular subgroup of parents, because the interventions that could possibly be offered as a result of the research should also be geared to the language and SES of the parents.

Implications

Despite parents' high average motivation and awareness of the reading-related activities beneficial for their children's reading skills, there appears to be a gap between intention and practice. For instance, while parents recognize the importance of encouraging their children to read books in their spare time, they may not consistently put this into practice. This suggests a need for interventions and support systems that bridge this intention-behavior gap and provide parents with the resources, guidance, and strategies to effectively engage in these activities with their children. Enhancing parental involvement in promoting reading habits can have a significant impact on improving children's literacy outcomes. Such initiatives can be implemented through partnerships between schools and other relevant stakeholders to provide comprehensive support and empower parents to translate their motivation into actions that positively influence their children's reading skills.

The results of this research also emphasize the importance of considering a broader range of predictors of reading skills beyond parental motivation and self-regulation. As the earlier theory suggests, factors other than parental motivation and self-regulation play crucial

roles in shaping a child's reading proficiency. Future research should therefore encompass these aspects to gain a more holistic perspective on the development of reading skills.

In terms of societal implications, the research underscores the urgency of addressing the declining reading skills observed in the Netherlands, as evidenced by the recent PIRLS study (Swart et al., 2023). Policymakers and educational institutions must take immediate action to reverse this trend and prioritize the improvement of reading abilities among young learners. Follow-up research should delve deeper into the mechanisms through which parental motivation, self-regulation, and other factors influence reading skills to gain a more nuanced understanding of the individual variation in learning to read.

Conclusion

In general, it can be concluded that the expectations have not been confirmed: in the sample, parental motivation and the child's self-regulation did not contribute to the decoding efficiency in grade 1. This suggests the presence of additional factors that act as predictors of reading skills, such as motivation of the child and other aspects of the literacy environment at home, like actual parental support. In order to validate the findings in this study and make the results more generalizable, it is necessary to reproduce it using a larger and more diverse sample. This research provides a foundation for future investigations into reading skills. This is particularly relevant in light of the recent publication of the PIRLS study (Swart et al., 2023), which highlights a concerning decline in reading skills in the Netherlands. Thus, urgent efforts are required to reverse this trend and ensure meaningful progress in stimulating reading proficiency for all children. Parental involvement is widely recognized as important for enhancing children's reading abilities. However, there is a need to shift the attention towards identifying the specific actions parents can take to effectively and efficiently contribute to their children's reading development. By focusing on these actionable strategies

and interventions, we can ensure that parental efforts are directed towards the most impactful approaches, maximizing the positive impact on children's reading skills.

In conclusion, the concerning decline of reading skills in society calls for action. To reverse this trend, it is crucial to empower parents and enable them to translate their motivation into tangible actions that positively influence their children's reading abilities.

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Appendices

Appendix A: Questionnaire parents

I think it is important to…

- Show children that reading is fun,
- Encourage children to pick out books about things the child has an interest in,
- Encourage children to read/look at books in their spare time,
- Encourage children to pick out books about fictional characters the child likes,
- Encourage children to recognize letters,
- Encourage children to recite the alphabet,
- Encourage children to practice reading words from lists or cards,
- Encourage children to learn letter sound correspondences.

Translation into Dutch:

Ik denk dat het belangrijk is om...

- Kinderen te laten zien dat lezen leuk is,
- Kinderen te stimuleren om boeken uit te kiezen over onderwerpen waar het kind interesse in heeft,
- Kinderen te stimuleren om in hun vrije tijd boeken te lezen/bekijken,
- Kinderen te stimuleren om boeken uit te kiezen over fictieve personages waar het kind van houdt,
- Kinderen te stimuleren om letters te herkennen,
- Kinderen te stimuleren om het alfabet op te zeggen,
- Kinderen te stimuleren om woorden te oefenen vanuit lijsten of kaarten,
- Kinderen te stimuleren om klank-letter correspondenties te leren.

Appendix B: Questionnaire parents after pilot (Q8 adjusted)

Ik denk dat het belangrijk is om…..
1. Kinderen te laten zien dat lezen leuk is
2. Kinderen te stimuleren om boeken te kiezen over onderwerpen waar het kind interesse in heeft
3. Kinderen te stimuleren om in hun vrije tijd boeken te lezen of te bekijken
4. Kinderen te stimuleren om boeken uit te kiezen over fictieve personages waar het kind van houdt
5. Kinderen te stimuleren om letters te herkennen
6. Kinderen te stimuleren om het alfabet op te zeggen
7. Kinderen te stimuleren om woorden te oefenen vanuit lijsten of kaarten
8. Kinderen te stimuleren om te leren welke klanken bij welke letters horen

Appendix C: Questionnaire adjusted CP-SRL

1. Before I start my schoolwork, I read the instructions carefully.
2. Before I start my schoolwork, I ask myself: ‘What is it about? What do I already know about it?’
3. If I get a task similar to one I have already done, I ask myself: ‘How did I approach it last time? Was that a good approach?’
4. I am good at motivating myself to finish my schoolwork.
5. I am good at working with consistent attention during my schoolwork.
6. I figure out the meaning of difficult words.
7. Even if my schoolwork is difficult or boring, I do my best.
8. I carry on until I finish my schoolwork.
9. During my schoolwork, I work attentively and don’t take my mind off it.
10. If I am distracted while doing my schoolwork, I immediately try to continue working.

After finishing my schoolwork, ...

11. …I go over my answers again.
12. …I check that I haven’t forgotten anything.
13. …I check if I have done everything that was asked for.
14. …I ask myself: ‘Have I done it the right way?’

Translation into Dutch:

1. Voordat ik met mijn werk begin, lees of luister ik wat ik moet doen.
2. Voordat ik met mijn werk begin, vraag ik mezelf af: 'Waar gaat het over? Wat weet ik al over het onderwerp?'
3. Als ik een opdracht krijg die lijkt op een opdracht die ik eerder heb gedaan, vraag ik mezelf af: 'Hoe heb ik dat de vorige keer aangepakt? Was dat een goede aanpak?'
4. Ik ben goed in mezelf motiveren om mijn werk af te maken.

5. Ik ben goed in geconcentreerd werken.
6. Als ik een moeilijk woord tegenkom, bedenk of vraag ik de betekenis
7. Ook als mijn werk moeilijk of saai is, doe ik mijn best.
8. Ik blijf doorgaan tot ik mijn werk af heb.
9. Tijdens mijn werk werk ik aandachtig en haal mijn gedachten er niet af.
10. Als ik afgeleid ben tijdens mijn werk, probeer ik meteen verder te werken.

Na het afmaken van mijn werk ...

11. …ga ik nog een keer mijn antwoorden na.
12. …controleer ik of ik niets ben vergeten.
13. …controleer ik of ik alles heb gedaan wat er gevraagd werd.
14. …vraag ik mezelf af: 'Heb ik het op de juiste manier gedaan?'

Appendix D: Questionnaire children after pilot

	Nooit	Soms	Altijd
1. Voordat ik met mijn werk begin, lees of luister ik wat ik moet doen.			
2. Voordat ik met mijn werk begin, vraag ik mezelf af wat ik al over het onderwerp weet.			
3. Ik ben goed in mezelf motiveren om mijn werk af te maken.			
4. Ik ben goed in geconcentreerd werken.			
5. Als ik een moeilijk woord tegenkom, bedenk of vraag ik de betekenis.			
6. Ook als mijn werk moeilijk of saai is, doe ik mijn best.			
7. Ik blijf doorgaan tot ik mijn werk af heb.			
8. Tijdens mijn werk, werk ik aandachtig en haal mijn gedachten er niet af.			
9. Als ik afgeleid ben tijdens mijn werk, probeer ik meteen verder te werken.			
10. Na het afmaken van mijn werk ga ik nog een keer mijn antwoorden na.			
11. Na het afmaken van mijn werk controleer ik of ik niets ben vergeten.			
12. Na het afmaken van mijn werk vraag ik mezelf af of ik het op de juiste manier heb gedaan.			