# The Relation Between Students' Intrinsic Reading Motivation and Book Reading in Recreational and School Contexts

**Franziska Maria Locher**
**Sarah Becker**
**Maximilian Pfost**
*University of Bamberg*

*In comparison with younger children, older students tend to be less motivated to read. A literature class that fails to motivate students is one aspect that has often been discussed in this regard. Using data from 405 German ninth graders, we examined how students' book reading is related to intrinsic situational and intrinsic habitual reading motivation in and out of school. The books that students reported to have read were characterized by LIX readability and text type. Our results first showed that recreational reading motivation exceeded school reading motivation. Second, the reading of classic literature was a negative predictor of intrinsic situational reading motivation. Third, in the school context, students who read more difficult books were less motivated to read them. Fourth, analyses showed that individual book-reading experiences were linked to intrinsic habitual reading motivation. We discuss practical implications for book reading in and out of the literature class.*

Keywords:   *habitual motivation, situational motivation, book reading, school-related reading, LIX readability*

ONE of the main goals of education is to teach students to constructively interact with written texts. In addition, the ability to read and understand texts is needed to participate in cultural, political, and economic life (Organisation for Economic Co-operation and Development, 2003). Reading motivation is an important factor that contributes to the positive development of such reading skills (Guthrie, Wigfield, Metsala, & Cox, 1999; McElvany, Kortenbruck, & Becker, 2008; Morgan & Fuchs, 2007; Petscher, 2010). Studies have found that students' reading motivation predicts their reading behavior (e.g., reading volume or reading material), which in turn fosters the development of reading skills. Numerous studies have confirmed reciprocal relations between reading motivation and reading behavior as well as reading skills (e.g., De Naeghel, Van Keer, Vansteenkiste, & Rosseel, 2012; McElvany et al., 2008; Stutz, Schaffner, & Schiefele, 2016). Although research has shown that reading motivation is a substantial predictor of reading skills, studies have shown that in comparison with younger children, older students and adolescents are often less motivated to read (Gottfried, Fleming, & Gottfried, 2001; Marcoulides, Gottfried, Gottfried, & Oliver, 2008; McKenna, Kear, & Ellsworth, 1995; Smith, Smith, Gilmore, & Jameson, 2012). Given the fact that the development of reading skills is not limited to early childhood but lasts until young adulthood or even longer (Alexander, 2005), the decrease in students' reading motivation might have negative consequences because the development of their reading skills and behavior strongly depends on their motivation to read. Therefore, it is of primary importance to identify the factors that contribute to this negative trend in the development of students' intrinsic reading motivation. One aspect that is often discussed in this regard is a literature class that fails to motivate students (e.g., Garbe, 2010; Philipp, 2011). Such a failure might be due to the books that are chosen in the instructional context or the teaching framework as well as to a lack of student participation in choosing the books. However, most studies that have analyzed individual differences in reading motivation have focused solely on recreational reading, neglecting the reading that is done in and for school (Neugebauer, 2013; Philipp, 2011). Therefore, in the present study, we examined students' book-reading habits in two contexts: school and recreational time. We focused on the relation between students' self-reported motivational-affective reading experiences with the books that they reported to read and the types of texts and readability of these books. Furthermore, we investigated whether students' reading experiences with these books affected the development of habitual intrinsic reading motivation in secondary school.

## Conceptualizations of Reading Behavior and Reading Motivation

To provide a better understanding of reading in general, we first present our conceptualizations of the two constructs

that are the focus of the present study: reading behavior and reading motivation. Throughout this article, we define reading behavior as the sum of activities related to reading. Such activities or behaviors can be operationalized in many ways. Therefore, to clarify the concept of reading behavior, we differentiate between the quantitative aspects ("How much do people read?") and the qualitative aspects ("What do people read?"). Quantitative aspects of reading behavior refer to the amount or volume of reading (e.g., number of books read in the last month) or aspects of time spent reading (e.g., average number of minutes spent reading per day). A common quantitative measure of reading behavior is a global evaluation of reading volume, such as the ones used in the PISA Study (Programme for International Student Assessment; Locher & Pfost, 2019; Organisation for Economic Co-operation and Development, 2010). Quantitative measures are often used in empirical research because they are quite economical and simple to implement. Qualitative aspects of reading behavior are multifaceted and comprise aspects such as the nature of the reading material (e.g., type of text, text difficulty, content of a text, or the medium [i.e., print or digital]). Assessing such qualitative aspects of students' reading behavior is a time- and space-consuming process and has therefore often been neglected in education research. For instance, qualitative information about people's reading behavior can be measured with reading diaries in which people write down which books, magazines, or newspapers they have read (e.g., R. C. Anderson, Wilson, & Fielding, 1988). Recent research has shown that differential effects can be found between the reading of different types of texts and reading motivation or reading skills (e.g., McGeown, Duncan, Griffiths, & Stothard, 2015; McGeown, Osborne, Warhurst, Norgate, & Duncan, 2016; Pfost, Dörfler, & Artelt, 2013). Compared with other reading activities, such as online reading (e.g., emails) or newspaper reading, the reading of traditional books has been found to be most strongly related to reading skill development (e.g., Pfost, Dörfler, & Artelt, 2013). Taken together, it is important to take a closer look at qualitative aspects of reading behavior, especially with a focus on students' book reading.

Many motivational constructs or terms have been used in the area of reading (Conradi, Jang, & McKenna, 2014). In general, reading motivation can be understood as a construct that specifically includes emotional-affective components experienced while reading (e.g., reading enjoyment), cognitive components (e.g., values, beliefs, and expectancies), and the intention to read (Artelt, Naumann, & Schneider, 2010; Möller & Schiefele, 2004). In general, motivation can be seen as falling on a continuum that ranges from extrinsic to intrinsic reasons for performing an action (Deci & Ryan, 1985, 2000; Möller & Schiefele, 2004). Intrinsic motivation is primarily determined by a high level of enjoyment experienced while performing an action and a high degree of autonomy perceived by the person performing the action

(Deci & Ryan, 1985, 2000; Möller & Schiefele, 2004). If a student reads a book because he or she likes the story or the topic, he or she is intrinsically motivated. Extrinsic motivation, however, is determined by external consequences and can be separated from the action itself (Deci & Ryan, 1985, 2000; Möller & Schiefele, 2004). In other words, if a student reads because he or she wants to get good grades in school, he or she is extrinsically motivated to read.

**Theoretical Foundation and Review of Existing Studies**

To provide a theoretical framework for our study and our research hypotheses, we focused on two theories: first, the idea of situational and habitual reading motivation (Guay, Vallerand, & Blanchard, 2000; Guthrie, Hoa, Wigfield, Tonks, & Perencevich, 2005; Hidi & Harackiewicz, 2000); second, self-determination theory (SDT) by Deci and Ryan (1985, 2000).

*From Situational to Habitual Reading Motivation: How Do Changes in Reading Motivation Occur?*

As prior research has shown, students' intrinsic motivation varies significantly across large periods (Gottfried et al., 2001; Marcoulides et al., 2008; McKenna et al., 1995; Smith et al., 2012). For example, across a period of 9 years, Gottfried et al. (2001) reported a significant negative trend for intrinsic motivation for reading, math, or school in general. One possible explanation for such changes concerns situational reading motivation and its effects on habitual reading motivation (Guay et al., 2000; Guthrie et al., 2005; Hidi & Harackiewicz, 2000). Habitual motivation is characterized by relatively stable feelings about specific activity areas, such as a general enjoyment of reading (Hidi & Harackiewicz, 2000; Neugebauer, 2016a; Schiefele, 1991). Situational motivation, however, is triggered spontaneously by characteristics of the situation and is limited in duration (Hidi & Harackiewicz, 2000; Neugebauer, 2016a). Therefore, situational motivation stems from the immediate context of the situation, such as the enjoyment felt while reading a book. Repetitive experiences and emotions in and relating to specific situations (situational motivation) can manifest themselves and result in habitual reading motivation. Pursuant to this idea, positive situational experiences while reading a book (e.g., liking the content and story, satisfaction due to knowledge acquisition) can lead to higher habitual motivation. Negative experiences, however, can lead to lower habitual motivation. Taken together, motivational-affective experiences in response to specific reading situations are expected to affect and change habitual reading motivation. Therefore, to understand the development of students' habitual reading motivation, specific motivational-affective experiences with individual books should be taken into account.

From recent research, we can determine the ambition to include such dynamic or situational aspects of motivation in reading research (Neugebauer, 2016a, 2016b). For example, Guthrie et al. (2005) were among the first to examine the extent to which students' situational motivation in reading leads to habitual reading motivation. The results showed that students' situated extrinsic motivation (e.g., wanting to get a good grade for reading a book) and habitual extrinsic motivation were positively correlated, just as a decrease in situated extrinsic motivation was found when there was a decrease in habitual extrinsic motivation. In another study, Guthrie et al. (2007) interviewed 31 fourth graders and examined the relations between situational reading motivation for narrative and expository books and general reading motivation. In cross-sectional correlation analyses, they found that situational reading motivation (for informational as well as narrative text types) was strongly correlated with students' habitual reading motivation ($r \sim .75$). In sum, although there is initial empirical evidence that situational reading motivation predicts habitual reading motivation, prior studies in this line of research neglected to describe and compare specific reading situations (e.g., regarding book characteristics such as readability or type of text) to better understand the development of individual differences in habitual reading motivation.

### *A Self-Determination Perspective: Reading in Recreational and School-Related Contexts*

To understand the nature of students' reading motivation and why there might be differences in situational reading motivation depending on the context and the specific situation, we additionally refer to the SDT by Deci and Ryan (1985, 2000) with a focus on the need for autonomy. In the cognitive evaluation theory (a subtheory of SDT), three initial psychological needs are essential for people's intrinsic motivation to perform an action: the needs for competence, autonomy, and relatedness. Relatedness refers to the relevance of the task to a person's social environment (e.g., important for peers and family) and the opportunity to establish social connections. The need for competence refers to a person's perception of his or her skills while carrying out an action. Finally, the need for autonomy refers to completing a task because a person wants to, rather than because the task is obligatory. If all three needs are satisfied, this results in higher intrinsic motivation.

According to SDT, school-related reading is expected to be perceived as less intrinsically motivating because students have a low level of autonomy, given that teachers and other school-related aspects of the reading situation (e.g., school internal agreements, national curriculum) are predominantly responsible for determining which books they have to read (Ivey & Broaddus, 2001; McKenna, Conradi, Lawrence, Jang, & Meyer, 2012). Teachers are somewhat bound to the national curriculum (Bavarian Ministry of Education and Culture, 2003), which regulates what students need to learn. For example, according to the national curriculum in the region of Bavaria, students in Grade 9 must read and understand literary texts from selected topics (at least two books) from the 19th century to the present. As a consequence, teachers tend to choose books that will help students reach the curricular learning targets. In comparison with school-related reading, recreational reading is expected to be perceived as more autonomous. Students may choose the genre or content that they like and the texts that they believe they are capable of reading. Furthermore, they may choose a book on the basis of recommendations that they have received from their peers, parents, or the media, thus giving them the opportunity to engage in follow-up communications (Howard, 2008; Merga, 2014, 2015). It might be assumed that the more autonomy that students have in choosing books, the better the match between students' interests or abilities and the reading matter, which in turn might result in a higher level of intrinsic reading motivation (see Richter & Plath, 2005). In summary, the differences in the given autonomy of choosing a book between school and recreational reading should result in motivational differences.

Until now, only a few studies have examined reading motivation while considering reading in and for school and in a recreational context (De Naeghel et al., 2012; McGeown et al., 2016; McKenna et al., 1995). McKenna et al. (1995), for instance, compared children's attitudes toward reading from Grade 1 to Grade 6 in and for school contexts and during leisure time. The authors showed that reading enjoyment while reading recreationally was higher that than for school-related reading. Positive attitudes toward reading declined during the elementary school years in both contexts. Stronger preferences for recreational reading than for school-related reading were also found in a recent study by McKenna et al. (2012). However, none of the studies (at least known to us) examined specific books that students had to read or chose to read in combination with reading motivation. Rather, they considered global information about students' reading tendencies (e.g., "How often do you read fiction books?").

But merging information about the books that students actually read (e.g., readability and type of text) with their book-related situational reading motivation might be an important step toward a deeper understanding of the development of students' intrinsic reading motivation.

### **Aims of the Present Study**

We focused this study on two main research questions. First, we were interested in whether we would find differences between recreational reading and school-related reading. To address this first research question, we examined differences in (a) the average level of intrinsic situational reading motivation; (b) students' reading behavior,

with a focus on type of text and text difficulty, the latter of which was operationalized by a book's readability; and (c) the relation between the measures of reading behavior and intrinsic situational reading motivation. In accordance with SDT (Deci & Ryan, 2000), we expected that school-related reading would be associated with less autonomy perception, whereas recreational reading would be more autonomously regulated, leading to differences in intrinsic reading motivation and reading behavior. Therefore, we hypothesized that intrinsic situational motivation would be higher during recreational time than in school because greater autonomy would lead to higher intrinsic motivation. Furthermore, we explored what kinds of books students read in both contexts and how these books, with respect to text type and readability, are related to intrinsic situational reading motivation.

For our second research question, we asked whether intrinsic situational motivation predicts intrinsic habitual reading motivation. Motivational changes occur on the basis of intrinsic situational reading motivation and its effects on long-term reading motivation through repetitive experiences (Hidi & Harackiewicz, 2000). Therefore, we expected to find positive relations between students' self-reported motivational-affective reading experiences and their intrinsic habitual reading motivation in both contexts.

## Method

### Design and Participants

All analyses relied on data from the Bamberg BiKS-8-14 longitudinal study[1] (educational processes, competence development, and selection decisions in preschool and school-age children; Artelt, Blossfeld, Faust, Roßbach, & Weinert, 2013). The BiKS study began in 2006 when the participating children were attending third grade in elementary schools in Germany. For the current study, we used data from when these students were attending Grade 9 in secondary school. The data that we analyzed were assessed in 2012 (May to July; Wave 8). At this measurement point, a sample of 438 students received a questionnaire that asked for detailed information about their reading habits. Of the 438 students who received this questionnaire, 405 provided valid information about the books that they had read, which formed the foundation of our study. For our longitudinal analyses, we additionally used student data from Grade 7 (Wave 6). The students' mean age in Grade 9 was 15.34 years ($SD = 0.39$); 60% of the sample were female adolescents; and about 7% indicated that they had a migration background, meaning that at least one parent was not born in Germany. Eighty-three percent of the students in our sample attended upper-track schools/Gymnasium. In most German states, children attend elementary school until the fourth grade. After the transition to secondary school, students are separated, usually according to their academic abilities, into academic-track schools (Gymnasium), which prepare students for university admission, nonacademic-track schools (Hauptschule, Realschule), or comprehensive schools.

### Rating Process and Instruments

To address our research questions, we used information about qualitative aspects of students' reading behavior. In our study, qualitative aspects of students' reading behavior denote any information about the contents and characteristics of the specific books that students reported to have read. Therefore, at this point, we explain the procedure by which students' book reading was rated to provide a better understanding of the measures that we used. To analyze recreational and school-related book-reading behavior, we used responses from two open-ended questions: "Please indicate the title and author of a maximum of three books you had to read for literature class in the past 6 months" (school-related reading) and "three books you read for enjoyment in your leisure time in the past 6 months" (recreational reading). Therefore, we had data from a minimum of one book to a maximum of three books for recreational as well as school-related reading per student. In the end, 520 book titles were coded.

*Type of text.* We evaluated the data that were available on the books by employing a standardized coding scheme. To create a reliable and informative rating system, we used the following approach: First, we screened established reading behavior measures regarding differentiated evaluations related to different types of texts (e.g., NEPS [National Educational Panel Study] or PISA) and used these as a basis for our chosen categories. Second, we conducted an extensive literature search to add characteristic checklists to the specific types of texts. Although there is a general understanding of what people most often think of when they hear literature-related terms (e.g., "classic literature"), there is not necessarily a distinct definition for all the types of texts that could have been used to develop our coding manual. Finally, we consulted experts in the field of German philology, linguistics, and literature (researchers and practitioners) to improve our characteristic checklists. The final coding scheme was completed in close cooperation with these experts.

Using the coding scheme, we classified books as belonging to classic literature, modern fiction, nonfiction, or comics. Classic literature books were defined as fiction books that are well known and considered (culturally) important literary works with a high but, even more important, long-lasting standing in the public eye. This definition of classic literature was meant to include not just that from the classical literature epoch (beginning of the 19th century) but also literature from up to the period that followed the second world war (until 1965). Modern fiction books (published after 1965) were defined as current books dealing with the

individual stories of their protagonists. Different social problems or aspects are often the primary focus of these stories. Nonfiction books were defined as technical or informational books. Comic books were classified as magazines containing comic strips, meaning that these books consisted mostly of pictures with some words or short sentences. Furthermore, we subdivided modern fiction into more specific categories or subgenres: romance, historical fiction, contemporary fiction, crime and thrillers, and fantasy and science fiction. This procedure was applied to all books that students reported that they had read in school as well as in the recreational context. Book examples and an overview of the categories are depicted in Supplemental Figure S1 (online).

Two raters coded the book titles independently by using the manual. Rater A coded all 520 books, and Rater B coded about 45% of the books. Because the type of text was a nominally scaled variable, we used Cohen's kappa ($\kappa$) as the measure of interrater reliability: .83 for the type of text and .81 for the subgenres. Mismatches were compared and discussed between the raters.

*Readability.* As an objective measure of text difficulty, the LIX readability index was used. The LIX is a readability measure that is based on characteristics of the linguistic surface structure of a given text, and it has been shown to be valid with respect to several criteria (J. Anderson, 1983). The LIX readability index is calculated by computing the sum of the text's average sentence length with its percentage of long words (more than six letters): LIX readability = (number of words / number of periods) + (number of long words × 100 / number of words). We computed the LIX readability by using a computer-based tool to analyze each text passage from all books (Lenhard & Lenhard, 2014–2017). All text passages were drawn from the first relevant page. To standardize the text passages, we always used the first paragraph of 500 words plus the number of words left until the end of the sentence containing the 500th word. We decided to use the 500-word rule because we wanted to have a sufficient "text sample size" of about 30 sentences per book. According to Lenhard and Lenhard (2014–2017), as a general rule, books for children and adolescents have an LIX <40; fiction books, an LIX between 40 and 50; nonfiction books, an LIX between 50 and 60; and technical literature, an LIX >60. In our data set, the LIX readability ranged from 19.5 (low difficulty) to 93.5 (high difficulty). To ensure that the text passage from the beginning of a book could be considered representative of the whole book, we ran further analyses. We chose 30 books by chance, from which we additionally generated a text passage of 500 words + *x* words from the middle and the end of the book. We then used the three text passages from each book to estimate the intraclass correlation (ICC) as a measure of rating reliability, which was found to be satisfactory (ICC = .75, *n* = 30) (Wirtz & Caspar, 2002).

*Situational reading motivation.* We used a single-item rating to determine whether students enjoyed reading a book, comparable to the measurement approach employed by Guthrie et al. (2005). Thus, students were asked to answer the following question regarding their affective attitudes toward the books: "Please indicate for each book [mentioned in the open-ended question] how much you would enjoy reading books with similar topics" (4-point Likert scale: 1 = *not at all*, 4 = *very much*).

*Habitual reading motivation.* Habitual reading motivation was measured in the student questionnaire with three positive statements (e.g., "Reading is one of my favorite hobbies," "I enjoy getting a book as a present," "I like going to the library or bookstore") and one negative statement ("I read only because I have to"). The scale focuses on intrinsic components of reading motivation (4-point Likert scale: 1 = *completely disagree*, 4 = *completely agree*). The internal consistency ($\alpha$) of this measure was .89 in Grade 7 and .89 in Grade 9. The manifest scale score showed a slight but significant decrease between Grade 7 and Grade 9 (*M* = 3.14 vs. *M* = 3.03), *t*(499) = 4.23, *p* < .001, *d* = −0.20.

### Analysis Strategy

Each person indicated a maximum of three books. Therefore, information on the books plus up to three statements about their intrinsic situational motivation as well as one measure of intrinsic habitual reading motivation was available per person. This means that our data contained two sources of variation. First, there was variation within persons, representing the relation among the three books indicated by each person. Second, there was variation among persons, represented as clustered data: books (Level 1) clustered within students (Level 2). As a consequence, we applied hierarchical linear regression models within Mplus and used an MLR estimator (i.e., robust maximum likelihood; Muthén & Muthén, 1998–2007). Hierarchical linear regression analyses allowed us to examine the ICC, which is the relation of differences in students' intrinsic situational motivation among the three books and among all students.

To address our first research question, we ran descriptive analyses to identify differences between recreational reading and school-related reading with regard to intrinsic situational reading motivation and students' reading behavior. To examine the relation between intrinsic situational reading motivation and the books with respect to type of text and LIX readability, we ran zero-order correlation analyses on the within level. Therefore, intrinsic situational reading motivation was related to the LIX readability as well as to type of text in separate models. Furthermore, we ran zero-order models with each dichotomous text type variable separately. This means that we always tested one text type category against all other text type categories (e.g., situational reading

TABLE 1

*Means, Standard Errors, and ICCs With People as Clusters*

| | *n* (Cluster) | Scale range | *M* | *SE* | 95% CI | ICC |
|---|---|---|---|---|---|---|
| Recreational reading | | | | | | |
|   Intrinsic situational motivation | 560 (278) | 1–4 | 3.67 | .03 | [3.61, 3.73] | .230 |
|   LIX readability | 550 (275) | 21.5–93.5 | 38.09 | .37 | [37.36, 38.36] | .116 |
| School-related reading | | | | | | |
|   Intrinsic situational motivation | 565 (346) | 1–4 | 2.18 | .04 | [2.10, 2.26] | .197 |
|   LIX readability | 564 (346) | 19.5–77.3 | 41.40 | .55 | [40.32, 42.48] | .037 |

*Note.* Average cluster size: $M = 2.01$ for recreational reading and $M = 1.63$ for school-related reading. ICC = intraclass correlation.

motivation for classic literature: 1 = classic literature, 0 = all other categories). To explore the relation between intrinsic situational reading motivation and characteristics of the indicated books more deeply, we also computed a multiple regression model because the LIX readability measure and the text type might covary. Accordingly, we examined whether the LIX readability of the book explained additional variance in the prediction of intrinsic situational reading motivation above and beyond the reading of classic literature. Therefore, in addition to the classic literature variable, we included the LIX readability index in the model. $R^2$ and $\Delta R^2$ were reported to compare the models.

With our second research question, we wanted to examine whether intrinsic situational reading motivation was related to intrinsic habitual reading motivation (Model 1). We did this by using a multilevel regression model in which we regressed intrinsic habitual reading motivation in Grade 9 (Level 2) on intrinsic situational motivation in Grade 9 (Level 1). In Model 2, to examine the development of individual differences in intrinsic habitual reading motivation, we additionally included intrinsic habitual reading motivation in Grade 7 as a control variable. We modeled intrinsic habitual reading motivation as a latent variable including all four items. To avoid model misfit that could arise from using the same wording for items found in the intrinsic habitual reading motivation measure in Grades 7 and 9, we allowed a correlation between two of these items. All analyses were modeled separately for recreational and school-related reading. Missing data on the item level were treated with full information maximum likelihood estimation. An MLR estimator was used to handle the nonnormality.

## Results

### *Descriptive Results for Recreational and School-Related Reading*

A total of 405 students reported that they had read 1,142 books in school (573 books and 101 titles) and during their recreational time (569 books and 419 titles). Table 1 provides the descriptive statistics as well as the ICC. Students indicated a mean score of 3.67 (*SE* = 0.03) for intrinsic

situational reading motivation for books that they had read in their recreational time. Therefore, in absolute terms, students expressed quite positive feelings toward the books that they read in their recreational time. Contrary to this, students' intrinsic situational reading motivation in school reached a mean score of only 2.18 (*SE* = 0.04). A direct comparison of these two scores showed that, on average, students reported higher intrinsic situational reading motivation for recreational reading than for school-related reading, dependent *t* test: $t(418) = -28.13$, $p < .001$. Moreover, Table 1 reveals that, on average, the books that students reported that they had read in school and for school purposes had a higher objective text difficulty than those that they read in their recreational time (LIX readability: $M = 38.09$ vs. 41.40). As the 95% CIs did not overlap and as further supported by the results of a dependent *t* test, $t(301) = 4.22$, $p < .001$, these differences could be interpreted as statistically significant. Further correlation analyses revealed that intrinsic situational reading motivation in the school context and that during recreational time were not significantly related ($r = .04$, *ns*; see Supplemental Table S1 online). Therefore, experiences of intrinsic situational reading motivation in the school context were independent of such experiences during recreational time. The ICC, which provides information about the proportion of variance between a person's intrinsic situational reading motivation on Level 2 and Level 1, indicated that most of the variance could be traced back to differences among the books that the students read (Level 1) and that just a small part of the variance could be traced back to differences among readers (Level 2).

Table 2 displays the frequencies of the different text types, shown separately for recreational and school-related reading. In their recreational time, students almost exclusively read modern fiction books (92.4%), whereas classic literature (4.4%) and nonfiction literature (2.5%) were less prevalent. Contrary to reading for recreational purposes, in school, students reported that they had read almost equal proportions of classic literature (51.1%) and modern fiction (48.7%). Comic books and books that were not categorized in the aforementioned categories were hardly ever mentioned in either reading context. In-depth analyses further

TABLE 2

*Descriptive Statistics for Text Type and Zero-Order Relations to Intrinsic Situational Reading Motivation*

| | Recreational reading | | | | | School-related reading | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | $n$ | % | $B$ $(SE)$ | β | $R^2$ | $n$ | % | $B$ $(SE)$ | β | $R^2$ |
| Classic literature | 25 | 4.4 | −0.60 (0.17)** | −.25** | .064 | 293 | 51.1 | −0.56 (0.08)** | −.33** | .112 |
| Modern fiction | 526 | 92.4 | 0.39 (0.12)** | .21** | .064 | 279 | 48.7 | 0.56 (0.08)** | .33** | .111 |
| Nonfiction | 14 | 2.5 | −0.04 (0.12) | −.01 | .000 | 1 | 0.20 | — | — | |
| Comic books | 1 | 0.20 | — | — | — | 0 | 0.00 | — | — | — |
| Other | 3 | 0.50 | — | — | — | 0 | 0.00 | — | — | — |
| Books | 569 | 100.00 | | | | 573 | 100.00 | | | |
| LIX readability | 548 | — | −0.00 (0.00) | −.03 | .001 | 562 | — | −0.01 (0.00)** | −.19** | .034 |

*Note.* No relations were computed for $n < 5$; unstandardized results ($B$) and standardized results (β).
**$p < .01$.

TABLE 3

*Descriptive Statistics for the Subgenres of Modern Fiction Books and Zero-Order Relations to Situational Reading Motivation*

| | Recreational reading | | | | | School-related reading | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Subgenre | $n$ | % | $B$ $(SE)$ | β | $R^2$ | $n$ | % | $B$ $(SE)$ | β | $R^2$ |
| Modern fiction | | | | | | | | | | |
| Romance | 74 | 13.0 | 0.10 (0.07) | .07 | .005 | 10 | 1.70 | 0.53 (0.44) | .08 | .006 |
| Historical fiction | 27 | 4.70 | −0.08 (0.10) | −.04 | .001 | 46 | 8.0 | −0.07 (0.13) | −.02 | .000 |
| Contemporary fiction | 143 | 25.1 | −0.10 (0.06) | −.09 | .008 | 141 | 24.6 | 0.40 (0.09)** | .20** | .039 |
| Crime and thrillers | 104 | 18.3 | −0.02 (0.06) | −.02 | .000 | 74 | 12.9 | 0.37 (0.14)** | .15** | .022 |
| Fantasy and science fiction | 178 | 31.3 | 0.21 (0.05)** | .20** | .038 | 8 | 1.4 | 1.65 (0.19)** | .23** | .051 |
| All others | 43 | 7.60 | — | — | — | 294 | 51.3 | — | — | — |
| Books | 569 | 100.0 | | | | 573 | 100.0 | | | |

*Note.* Unstandardized results ($B$) and standardized results (β).
**$p < .01$.

revealed that when the subgenres of the modern fiction books between recreational and school-related reading were compared (Table 3), the most frequently read subgenre in school was contemporary fiction, whereas it was fantasy and science fiction in the recreational context. See Supplemental Table S2 for additional data on the average LIX readability and situational intrinsic reading motivation for each text type and subgenre.

*Intrinsic Situational Motivation and Book Reading*

Table 2 presents findings from regression analyses for intrinsic situational reading motivation. The results showed that in comparison with all other text types, significant negative effects on intrinsic situational reading motivation were found for the reading of classic literature within both recreational book reading ($B = -0.60$, β $= -0.25$, $p < .01$) and school-related reading ($B = -0.56$, β $= -0.33$, $p < .01$). Consequently, we found significant positive effects from modern fiction books on intrinsic situational reading motivation for recreational reading ($B = 0.39$, β $= 0.21$, $p < .01$) and

school-related reading ($B = 0.56$, β $= 0.33$, $p < .01$). Moreover, we found a significant relation between LIX readability and intrinsic situational reading motivation in school-related reading: Books with a higher level of text difficulty or a higher LIX readability index had lower associations with intrinsic situational reading motivation ($B = -0.01$, β $= -0.19$, $p < .01$). In recreational book reading, however, we did not find such a relation. Table 3 shows the relations between intrinsic situational reading motivation and the subgenres of modern fiction for both school-related reading and recreational reading. This analysis, which is characterized by quite a high resolution, indicated a positive correlation between situational reading motivation and the reading of books from the fantasy and science fiction subgenre ($B = 0.21$, β $= 0.20$, $p < .01$) during students' recreational time. The subgenres of crime and thrillers, historical novels, contemporary books, and romance were not significantly related to situational reading motivation during recreational time. With regard to reading in school-related contexts, we observed significant positive relations for situational motivation with the reading

TABLE 4

*Multiple Regression of Classic Books and LIX Readability on Intrinsic Situational Reading Motivation*

| | Recreational reading | | | School-related reading | | |
|---|---|---|---|---|---|---|
| | *B* | *SE* | β | *B* | *SE* | β |
| Model 1 | | | | | | |
| Classic literature | −0.60 | 0.17** | −.25** | −0.56 | 0.08** | −.33** |
| *R²* | .064 | | | .112* | | |
| Model 2 | | | | | | |
| Classic literature | −0.64 | 0.18** | −.27** | −0.52 | 0.08** | −.31** |
| LIX | −0.00 | 0.00 | .01 | −0.06 | 0.00* | −.10* |
| *R²* | .074 | | | .121** | | |
| Δ*R²* | .010 | | | .009 | | |

*Note.* Unstandardized results (*B*) and standardized results (β).
*$p < .05$. **$p < .01$.

of contemporary fiction (*B* = 0.40, β = 0.20, *p* < .01), crime and thrillers (*B* = 0.37, β = 0.15, *p* < .01), and fantasy and science fiction (*B* = 1.65, β = 0.23, *p* < .01).

### Multiple Regression Analyses

To concurrently analyze the effects of text type and LIX readability, we ran two multiple regression models (Table 4). In the first model, intrinsic situational reading motivation was regressed on classic literature books. As expected, intrinsic situational reading motivation was negatively related to the reading of classic literature. In the second model, we added the LIX readability to the first model. Besides the still significant negative effect of classic literature, the results from Model 2 showed a significant negative effect of LIX readability on intrinsic situational reading motivation in the school context. In comparison with the first model, Model 2 additionally explained 1.0% of the variance in intrinsic situational reading motivation. For book reading in a recreational context, the LIX readability index did not explain any additional variance.

### Relations Between Situational and Habitual Reading Motivation

Finally, we examined the development of individual differences in intrinsic habitual reading motivation. Our first step was to regress intrinsic habitual reading motivation in Grade 9 on intrinsic situational reading motivation in Grade 9. Then we included intrinsic habitual reading motivation in Grade 7 as a control variable in our model. Therefore, Figure 1 presents cross-sectional results for reading in both contexts, and Figure 2 presents longitudinal results for the regression model. Model 1a (Figure 1) indicates that for school-related reading, intrinsic situational reading motivation for the books that students reported to have read in school significantly predicted intrinsic habitual reading

motivation (*B* = 0.59, β = 0.32, *p* < .01). Contrary to school-related reading, there was no significant effect found between intrinsic situational reading motivation and intrinsic habitual reading motivation during recreational reading (Model 1b: *B* = 0.39, β = 0.18, *ns*). In the longitudinal models (Figure 2), this pattern changed slightly. When we controlled for intrinsic habitual reading motivation in Grade 7, our model for school-related reading still showed a significant positive relation between intrinsic situational reading motivation and intrinsic habitual reading motivation (Model 2a: *B* = 0.53, β = 0.28, *p* < .05). For recreational reading, the effect of intrinsic situational reading motivation on intrinsic habitual reading motivation increased slightly and, in contrast to the cross-sectional model, was statistically significant. In sum, intrinsic situational reading motivation in recreational reading positively predicted intrinsic habitual reading motivation in Grade 9 when we controlled for previous intrinsic habitual reading motivation (Model 2b: *B* = 0.43, β = 0.20, *p* < .05).

### Discussion

Most studies that have analyzed individual differences in emotional-affective components during reading have focused on recreational reading, neglecting schools and their role in developing students' reading motivation and reading skills (Neugebauer, 2013; Philipp, 2011). Furthermore, prior research has neglected to collect data on the specific texts that students read or to examine differences among reading materials (Troyer, Kim, Hale, Wantchekon, & Armstrong, 2018). We addressed this research gap by taking into account qualitative aspects of reading behavior ("What do people read?") in addition to quantitative aspects of reading behavior ("How much do people read?"). Therefore, the main motivation behind the present study was to examine the relation between students' reading behavior in the sense of book reading and their intrinsic situational reading motivation, as
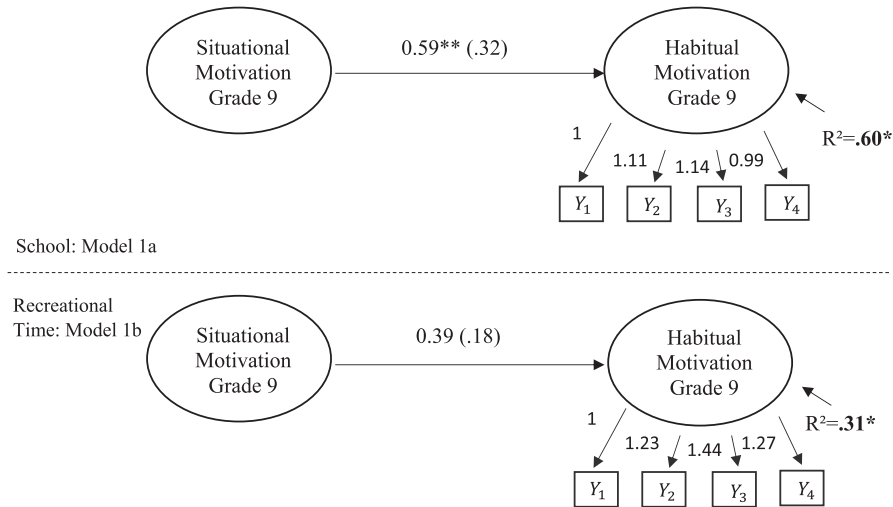
FIGURE 1. *Regression predicting intrinsic habitual reading motivation in Grade 9 for school-related reading (Model 1a) and recreational reading (Model 1b) on the between level (student): cross-sectional findings. Model 1a:* n = 565, χ² = 22.60,* df = 5, CFI = .97, RMSEA = .08. Model 1b: n = 560, χ² = 13.71,* df = 5, CFI = .98, RMSEA = .06. Unstandardized results (standardized results in parentheses). CFI = comparative fit index; RMSEA = root mean square error of approximation. *p < .05. **p < .01.*

well as to describe students' reading and compare the results between a recreational context and the school context. Furthermore, we wanted to examine the consequences of students' situational intrinsic reading motivation for their intrinsic habitual reading motivation. First, we hypothesized that intrinsic situational motivation for reading during recreational time would be higher than when reading for school. Second, we expected that intrinsic situational motivation would affect intrinsic habitual reading motivation. The results of the present study provided empirical evidence in support of both hypotheses.

*Differences Between Reading in Recreational and School-Related Contexts*

Our findings indicated that recreational reading behavior, in comparison with school-related reading behavior, differed substantially. First, the analyses showed that intrinsic situational motivation for recreational reading was higher than it was for school-related reading. The finding of higher recreational reading motivation was consistent with prior research (e.g., McKenna et al., 1995) and conformed to our expectations that were based on SDT by Deci and Ryan (1985, 2000). According to SDT, the initial need for autonomy leads to high intrinsic motivation. We expected that students would feel more autonomous while reading in a recreational context, resulting in higher intrinsic reading motivation. During school-related reading, however, we proposed that students would feel less autonomous and therefore less motivated to read. These expectations were reflected in the observed lower average found for intrinsic situational reading motivation during school-related reading in comparison

with recreational reading. However, the level of autonomy might not be the only factor that can explain motivational differences in reading that takes place in and out of school. Another explanation is that students indicated that they rather enjoy recreational reading because school-related reading was more strongly associated with performance goals due to grading practices and competition for good grades with other students than recreational reading was. Therefore, it would be interesting to have more information about how reading activities are included in school or in teachers' instructional practices. Second, students reported that they read fewer modern fiction books and more complex books in and for school than in their recreational time. This finding illustrates that in more self-determined contexts, such as their recreational time, students read other types of books than they read in more externally regulated contexts, such as school. Finally, intrinsic situational reading motivation in school and situational reading motivation in a recreational context were not significantly related to each other, which underlines the high situational variability of specific reading experiences. This is further supported by the low ICC found for situational reading motivation, which indicates a great deal of fluctuation in reading motivation among specific books in comparison with differences among persons.

*Intrinsic Situational Reading Motivation and Book Reading*

The zero-order analyses revealed that intrinsic situational reading motivation was negatively correlated with classic literature for recreational as well as school-related reading. This means that when students read classic
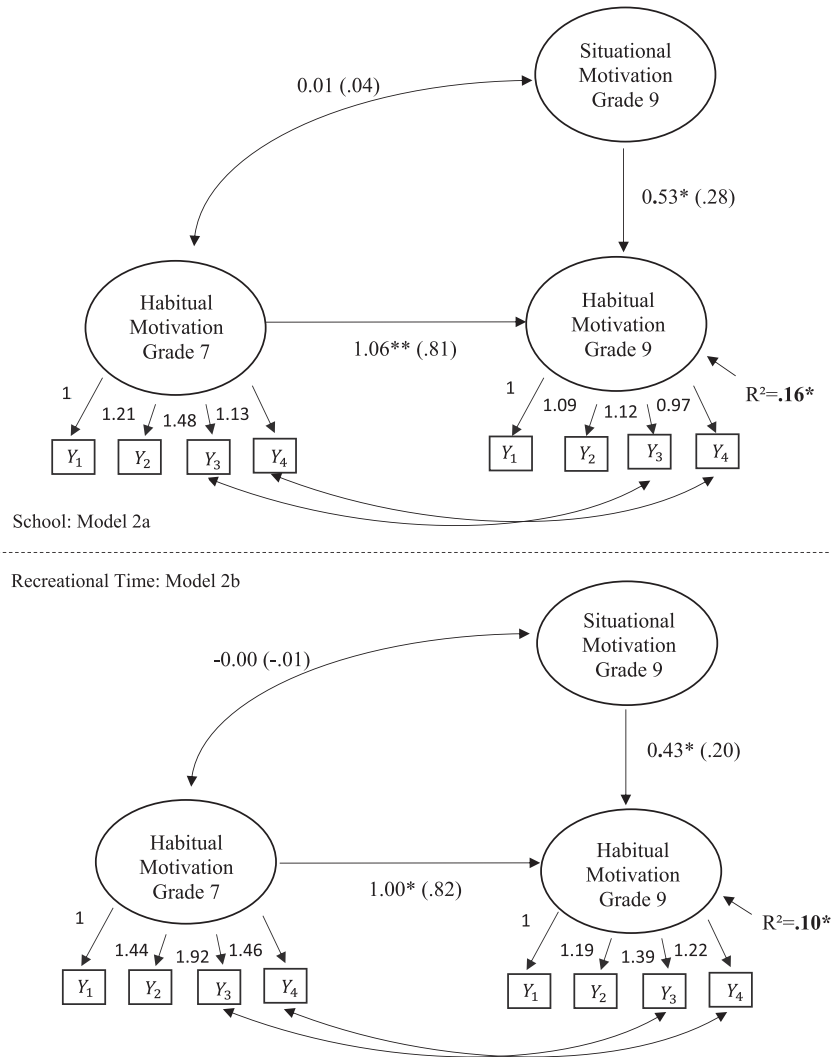
9

FIGURE 2. *Regression predicting intrinsic habitual reading motivation in Grade 9 for school-related reading (Model 2a) and recreational reading (Model 2b) on the between level (student): longitudinal findings. Model 2a:* n = 567, χ² = 63.19, df = 23, CFI = .97, RMSEA = .06. Model 2b: n = 562, χ² = 54.09, df = 23, CFI = .96, RMSEA = .05. Unstandardized results (standardized results in parentheses). CFI = comparative fit index; RMSEA = root mean square error of approximation. *p < .05. **p < .01.*

literature, they indicated that they could hardly imagine reading a book with comparable content, whereas they rather liked the books from the modern fiction genre. Such effects regarding the type of text seemed to be independent of the reading context because the effects were present and comparable in size between the recreational and school-related contexts. This means that, independent of whether students chose to read classic literature themselves or if they had to read it for school, they reported a lower intrinsic situational reading motivation. Therefore, it seems implausible to us that this finding can be explained by differences in autonomy. Rather, this effect is better explained by characteristics that are inherent to this type of text. In our opinion, the negative correlation between intrinsic situational reading motivation and classic literature might be

linked to the lack of the motivation dimension called *involvement* (Schiefele, Schaffner, Möller, & Wigfield, 2012). Involvement refers to the act of getting lost in a book and empathizing with the characters from the story. According to the involvement idea, people become more intrinsically motivated when they feel involved while reading. As modern fiction books are written in a modern style, consider modern topics, and so forth, it is possible that students are able to identify better and empathize more with the protagonists and stories than they do when reading classic books. This tendency in turn might influence their intrinsic reading motivation. Unfortunately, we had no way to directly test this hypothesis because we had no information in our data set about students' level of involvement while reading a book.

Regarding the relation between task difficulty and motivation, evidence in the area of reading was hard to find. However, some first studies indicated that a high perceived and objective text difficulty negatively predicts reading interest and affective components (Fulmer & Frijters, 2011; Fulmer & Tulis, 2013). Our analyses revealed that intrinsic situational motivation in school is lower when students are required to read texts with a higher level of difficulty in the sense of a higher LIX readability. For recreational reading, no such pattern was found. On the basis of this finding, one might conclude that it is not the reading of complex books in general that results in low reading motivation. Rather, context-related differences—that is, differences in the level of self-determination—seem to contribute to this effect. In addition, in line with SDT (Deci & Ryan, 1985, 2000), people become highly motivated when they feel competent. Therefore, one explanation for the pattern that we found might be that students independently chose the books that they wanted to read during their recreational reading; therefore, they also independently selected the difficulty of these books, thus avoiding those that were beyond their actual competence level. Therefore, this led to less consideration of classic literature and difficult books, as our results showed. In school, however, students mostly read what their teacher assigned them to read. The assignment of a difficult book might lead to feelings of low competence and therefore might cause students to be less intrinsically motivated to read the assigned book. Nevertheless, to validate this preliminary explanation, it would be useful to take the reader into account to a greater degree, for instance, by using information about the subjective difficulty of the text perceived by the students. Furthermore, we should keep in mind that the literature that we found in the two contexts was not equal: whereas half the books in the school-related context were from the classic literature category, nearly all the indicated literature in the recreational context was from the modern fiction category. Therefore, the reason that we found no effect of text difficulty/LIX readability in the recreational context might be due to lower heterogeneity among books.

## Development of Habitual Reading Motivation

Intrinsic reading motivation decreases from midchildhood to early adolescence (Gottfried et al., 2001; McKenna et al., 1995). Therefore, one of our research goals was to examine which mechanisms contribute to such changes. In accordance with Hidi and Harackiewicz (2000) and Schiefele (1991), we expected that intrinsic situational reading motivation, which was defined as the liking or disliking of books that students read in our study, would be related to the longer lasting intrinsic habitual reading motivation. Our longitudinal analyses supported this hypothesis. The results showed that a student's intrinsic situational motivation, meaning that the student enjoyed reading a book and could imagine reading a similar book in the future, positively predicted individual differences in the development of that student's intrinsic habitual reading motivation. This applied to recreational reading as well as to school-related reading. These findings align well with the results presented by Guthrie et al. (2005), who also confirmed the relation between situational and habitual reading motivation. In our study, we were additionally able to show that this relation was stronger in the school-related context than in the recreational context. This made clear that school plays an important role in the development of students' intrinsic habitual reading motivation.

## Limitations

The study also has some limitations. First, there is no single unambiguous system for categorizing books into different book genres. Although there is a general consensus on what people usually think of when they hear the term *classic literature*, there is still not a distinct-enough definition to cover all of the different types of texts that we could have used in our coding manual. Therefore, it has to be taken into account that the coding scheme that we developed and used is just one way of differentiating these books. However, categorizations are based on prevalent technical literature (e.g., Brunner & Moritz, 1997; Jeßing & Köhnen, 2007), common measures of type of text (e.g., PISA or NEPS), and expert discussions. In addition, the coding scheme demonstrated satisfactory interrater reliability. Future research might take further book characteristics into account, such as the gender or age of the protagonist, because this might also affect a reader's intrinsic motivation. Second, the sample that we used for our analyses was predominantly composed of students from upper-track schools. Current research showed (e.g., Schaffner, Philipp, & Schiefele, 2016) that groups of upper-track and nonacademic track students differ significantly, for instance, regarding their reading motivation and reading competence. Furthermore, students might differ with regard to book preferences. Therefore, it would be interesting for future research to extend the focus on differences between school tracks. Third, LIX readability is a common index that considers length of sentences and words. Nevertheless, there might be further variables that can make comprehension cognitively taxing, such as the number of connectives, number of propositions, organizational structure, or use of archaic language. Moreover, the LIX readability was computed by using a specific text passage and not the whole book. Nevertheless, our analyses revealed that the text passages from the first pages of a book were correlated with the text passages from the middle and end of the book. Therefore, the passages can be considered representative. Fourth, we had no information about the role of the teacher or the educational setting. Teachers are not entirely free to make their own decisions about which books to

choose for their literature classes and how to "work" with these books. Therefore, it would be interesting to know more about the actual teaching units as well as to examine the extent to which students were involved in the decision-making processes in literature class. Finally, situational reading motivation was not assessed in real time but rather retrospectively. Therefore, memory effects might be an issue. Furthermore, as situational reading motivation was measured retrospectively, intrinsic situational reading motivation and intrinsic habitual reading motivation were measured at the same time or with the same questionnaire. Therefore, we could not definitely conclude that the two measures did not interfere with each other. To handle this issue, daily diaries might be a good approach to use in future research. Diary entries might also provide an interesting way to uncover more facets of reading behavior than only the traditional book reading that we took into account. Finally, it might be interesting to differentiate between digital and analog reading media because there is a high prevalence of digital texts, such as online newspapers and ebooks, which might possibly affect how much students read.

### Conclusion and Implications for Instructional Practice and Future Research

In sum, our results showed that students' recreational and school-related reading behavior varies considerably and that the question of what people read can make a huge difference in their intrinsic motivation (e.g., reading classic literature correlates negatively with students' intrinsic reading motivation). In other words, qualitative aspects of reading behavior in the sense of text type and LIX readability of a book are significantly related to the development of students' intrinsic reading motivation.

Schools offer important opportunities to bring children and young adolescents in contact with books, especially when the exposure to print in a student's home environment is low (e.g., Nicholson, 1997; Philipp, 2011). Furthermore, school plays an important role in the development of students' intrinsic reading motivation, as our results could show. With this in mind for the purpose of developing students' motivation, it is important to determine the optimal balance between how much classic literature and how much modern fiction students should be asked to read and whether students should become even more integrated into the process of making decisions about the types of books that they will read in their literature classes. This suggestion is well aligned with Richter and Plath (2005), who discussed the mismatch between students' reading preferences and the books read in school as the main reason for the decreases found in their reading motivation. Therefore, it might be worthwhile for both researchers and practitioners to actively address the decision-making process behind book choices in literature

classes. Reading and understanding classic literature is and probably will remain an essential element of literature class. Hence, in addition to a book selection adapted to students' interests, we should ask how the reading of classic literature could be framed better in class to promote students' motivation to read (e.g., role/theater playing, including new media). The results of our study showed that already half of the literature in school consists of modern fiction books (the type of text that students preferred the most), but still, students' school-related intrinsic reading motivation was lower than for recreational reading. Therefore, future research might take a closer look at what exactly happens in literature classes. Moreover, future research should then also take into account books and other reading materials that have actually been read and the different reading situations because our study showed that individual experiences with intrinsic situational reading affect intrinsic habitual reading motivation.

### Note

1. All data and full information on the variables and study design are available at the Institute for Educational Quality Improvement, http://doi.org/10.5159/IQB_BIKS_8_14_v2. Further information can be found in the work of Pfost, Artelt, and Weinert (2013).

### References

Alexander, A. P. (2005). The path to competence: A lifespan developmental perspective on reading. *Journal of Literacy Research*, *37*(4), 413–436. doi:10.1207/s15548430jlr3704_1

Anderson, J. (1983). LIX and RIX: Variations on a little-known readability index. *Journal of Reading*, *26*(6), 490–496.

Anderson, R. C., Wilson, P. T., & Fielding, L. G. (1988). Growth in reading and how children spend their time outside of school. *Reading Research Quarterly*, *23*(3), 285–303.

Artelt, C., Blossfeld, H.-P., Faust, G., Roßbach, H.-G., & Weinert, S. (2013). *Bildungsprozesse, Kompetenzentwicklung und Selektionsentscheidungen im Vorschul- und Schulalter* [Educational processes, competence development and selection decisions in preschool and school age] (BiKS-8-14) (2nd ed.). Berlin, Germany: Institut zur Qualitätsentwicklung im Bildungswesen.

Artelt, C., Naumann, J., & Schneider, W. (2010). Lesemotivation und Lernstrategien [Reading motivation and learning strategies]. In E. Klieme, C. Artelt, J. Hartig, et al. (Eds.), *PISA 2009. Bilanz nach einem Jahrzehnt* [PISA 2009. Results after one decade] (pp. 73–112). Münster, Germany: Waxmann.

Bavarian Ministry of Education and Culture. (2003). *Lehrplan für das Gymnasium in Bayern* [Curriculum for Gymnasium in Bavaria]. Retrieved from http://www.isb-gym8-lehrplan.de/contentserv/3.1.neu/g8.de/index.php?StoryID=26241

Brunner, H., & Moritz, R. (1997). *Literaturwissenschaftliches Lexikon: Grundbegriffe der Germanistik* [Literary dictionary:

Basic concepts of german philology]. Berlin, Germany: Erich Schmidt Verlag.

Conradi, K., Jang, B. G., & McKenna, M. C. (2014). Motivation terminology in reading research: A conceptual review. *Educational Psychology Review*, *26*(1), 127–164. doi:10.1007/s10648-013-9245-z

De Naeghel, J., Van Keer, H., Vansteenkiste, M., & Rosseel, Y. (2012). The relation between elementary students' recreational and academic reading motivation, reading frequency, engagement, and comprehension: A self-determination theory perspective. *Journal of Educational Psychology*, *104*(4), 1006–1021. doi:10.1037/a0027800

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York, NY: Plenum Press.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, *11*(4), 227–268. doi:10.1207/S15327965PLI1104_01

Fulmer, S., & Frijters, J. (2011). Motivation during an excessively challenging reading task: The buffering role of relative topic interest. *Journal of Experimental Education*, *79*(2), 185–208. doi:10.1080/00220973.2010.481503

Fulmer, S., & Tulis, M. (2013). Changes in interest and affect during a difficult reading task: Relationships with perceived difficulty and reading fluency. *Learning and Instruction*, *27*, 11–20. doi:10.1016/j.learninstruc.2013.02.001

Garbe, C. (2010). Lesesozialisation [Socialization in reading]. In C. Garbe, K. Holle, & T. Jesch (Eds.), *Texte lesen: Lesekompetenz-Textverstehen-Lesedidaktik-Lesesozialisation* [Text reading: Reading competence–reading comprehension–reading didactics–reading socialization] (pp. 167–221). Paderborn, Germany: F. Schöningh.

Gottfried, A., Fleming, J., & Gottfried, A. W. (2001). Continuity of academic intrinsic motivation from childhood through late adolescence: A longitudinal study. *Journal of Educational Psychology*, *93*(1), 3. doi:10.1037/0022-0663.93.1.3

Guay, F., Vallerand, R. J., & Blanchard, C. (2000). On the assessment of situational intrinsic and extrinsic motivation: The Situational Motivation Scale (SIMS). *Motivation and Emotion*, *24*(3), 175–213. doi:10.1023/a:1005614228250

Guthrie, J. T., Hoa, L., Wigfield, A., Tonks, S. M., Humenick, N. M., & Littles, E. (2007). Reading motivation and reading comprehension growth in the later elementary years. *Contemporary Educational Psychology*, *32*(3), 282–313. doi:10.1016/j.cedpsych.2006.05.004

Guthrie, J. T., Hoa, L. W., Wigfield, A., Tonks, S. M., & Perencevich, K. C. (2005). From spark to fire: Can situational reading interest lead to long-term reading motivation? *Reading Research and Instruction*, *45*(2), 91–117. doi:10.1080/19388070609558444

Guthrie, J. T., Wigfield, A., Metsala, J. L., & Cox, K. E. (1999). Motivational and cognitive predictors of text comprehension and reading amount. *Scientific Studies of Reading*, *3*(3), 231–256. doi:10.1207/s1532799xssr0303_3

Hidi, S., & Harackiewicz, J. M. (2000). Motivating the academically unmotivated: A critical issue for the 21st century. *Review of Educational Research*, *70*(2), 151–179. doi:10.3102/00346543070002151

Howard, V. (2008). Peer group influences on avid teen readers. *New Review of Children's Literature and Librarianship*, *14*(2), 103–119. doi:10.1080/13614540902794086

Ivey, G., & Broaddus, K. (2001). "Just plain reading": A survey of what makes students want to read in middle school classrooms. *Reading Research Quarterly*, *36*(4), 350–377. doi:10.1598/rrq.36.4.2

Jeßing, B., & Köhnen, R. (2007). *Einführung in die neuere deutsche Literaturwissenschaft* [Introduction in modern German literature studies]. Stuttgart, Germany: J. B. Metzler Verlag / Springer Verlag.

Lenhard, W., & Lenhard, A. (2014–2017). *Berechnung des Lesbarkeitsindex LIX nach Björnson* [Calculation of the Readability index LIX]. Retrived from https://www.psychometrica.de/lix.html

Locher, F. M., & Pfost, M. (2019). Erfassung des Lesevolumens in Large-Scale Studien. Ein Vergleich von Globalurteil und textspezifischem Urteil. [Measuring reading volume in large-scale assessments: A comparison of an overall evaluation and a differentiated evaluation relating different text types]. *Diagnostica*, *1*, 26–36. doi:10.1026/0012-1924/a000203

Marcoulides, G., Gottfried, A. E., Gottfried, A. W., & Oliver, P. (2008). A latent transition analysis of academic intrinsic motivation from childhood through adolescence. *Educational Research and Evaluation*, *14*(5), 411–427. doi:10.1080/13803610802337665

McElvany, N., Kortenbruck, M., & Becker, M. (2008). Lesekompetenz und Lesemotivation [Reading competence and reading motivation]. *Zeitschrift für Pädagogische Psychologie*, *22*(34), 207–219. doi:10.1024/1010-0652.22.34.207

McGeown, S. P., Duncan, L. G., Griffiths, Y. M., & Stothard, S. E. (2015). Exploring the relationship between adolescent's reading skills, reading motivation and reading habits. *Reading and Writing*, *28*(4), 545–569. doi:10.1007/s11145-014-9537-9

McGeown, S. P., Osborne, C., Warhurst, A., Norgate, R., & Duncan, L. G. (2016). Understanding children's reading activities: Reading motivation, skill and child characteristics as predictors. *Journal of Research in Reading*, *39*(1), 109–125. doi:10.1111/1467-9817.12060

McKenna, M. C., Conradi, K., Lawrence, C., Jang, B. G., & Meyer, P. (2012). Reading attitudes of middle school students: Results of a U.S. survey. *Reading Research Quarterly*, *47*(3), 283–306. doi:10.1002/rrq.021

McKenna, M. C., Kear, D. J., & Ellsworth, R. A. (1995). Children's attitudes toward reading: A national survey. *Reading Research Quarterly*, *30*(4), 934–956. doi:10.2307/748205

Merga, M. K. (2014). Peer group and friend influences on the social acceptability of adolescent book reading. *Journal of Adolescent & Adult Literacy*, *57*(6), 472–482. doi:10.1002/jaal.273

Merga, M. K. (2015). Are avid adolescent readers social networking about books? *New Review of Children's Literature and Librarianship*, *21*(1), 1–16. doi:10.1080/13614541.2015.976073

Möller, J., & Schiefele, U. (2004). Motivationale Grundlagen der Lesekompetenz [Motivational basics of reading competence]. In U. Schiefele, C. Artelt, W. Schneider, & P. Stanat (Eds.), *Struktur, Entwicklung und Förderung von Lesekompetenz: Vertiefende Analysen im Rahmen von PISA 2000* [Structure, development and enhancement: Analyses in the course of PISA

2000] (pp. 101–124). Wiesbaden, Germany: VS Verlag für Sozialwissenschaften.

Morgan, L. P., & Fuchs, D. (2007). Is there a bidirectional relationship between children's reading skills and reading motivation? *Council for Exceptional Children*, *73*, 165–183. doi:10.1177/001440290707300203

Muthén, L. K., & Muthén, B. O. (1998–2007). *Mplus user's guide*. Retrieved from https://www.statmodel.com/download/usersguide/Mplus%20user%20guide%20Ver_7_r3_web.pdf

Neugebauer, S. (2013). A daily diary study of reading motivation inside and outside of school: A dynamic approach to motivation to read. *Learning and Individual Differences*, *24*, 152–159. doi:10.1016/j.lindif.2012.10.011

Neugebauer, S. (2016a). Assessing situated reading motivations across content areas: A dynamic literacy motivation instrument. *Assessment for Effective Intervention*, *42*(3), 131–149. doi:10.1177/1534508416666067

Neugebauer, S. (2016b). Stable or situated understandings of adolescent reading engagement across readers and raters. *Journal of Educational Research*, *109*(4), 391–404. doi:10.1080/00220671.2014.968914

Nicholson, T. (1997). Closing the gap on reading failure: Social background, phonemic awareness, and learning to read. In B. A. Blachman (Ed.), *Foundations of reading acquisition and dyslexia: Implications for early intervention* (pp. 381–407). New York, NY: Routledge.

Organisation for Economic Co-operation and Development. (2003). *Literacy skills for the world of tomorrow: Further results from PISA 2000*. Paris, France: Author.

Organisation for Economic Co-operation and Development. (2010). *PISA 2009 assessment framework: Key competencies in reading, mathematics and science*. Paris, France: Author.

Petscher, Y. (2010). A meta-analysis of the relationship between student attitudes towards reading and achievement in reading. *Journal of Research in Reading*, *33*(4), 335–355. doi:10.1111/j.1467-9817.2009.01418.x

Pfost, M., Artelt, C., & Weinert, S. (2013). *The development of reading literacy from early childhood to adolescence: Empirical findings from the Bamberg BiKS longitudinal studies* (Vol. 14). Bamberg, Germany: University of Bamberg Press.

Pfost, M., Dörfler, T., & Artelt, C. (2013). Students' extracurricular reading behavior and the development of vocabulary and reading comprehension. *Learning and Individual Differences*, *26*, 89–102. doi:10.1016/j.lindif.2013.04.008

Philipp, M. (2011). *Lesesozialisation in Kindheit und Jugend. Lesemotivation, Leseverhalten und Lesekompetenz in Familie, Schule und Peer-Beziehung*. [Socialization in reading in childhood and adolescence. Reading motivation, reading behavior and reading competence in family, school and peergroups] (*Vol. 1*). Stuttgart, Germany: Kohlhammer.

Richter, K., & Plath, M. (2005). *Lesemotivation in der Grundschule: empirische Befunde und Modelle für den Unterricht*. Weinheim, Germany: Beltz Juventa.

Schaffner, E., Philipp, M., & Schiefele, U. (2016). Reciprocal effects between intrinsic reading motivation and reading competence? A cross-lagged panel model for academic track and nonacademic track students. *Journal of Research in Reading*, *39*(1), 19–36. doi:10.1111/1467-9817.12027

Schiefele, U. (1991). Interest, learning, and motivation. *Educational Psychologist*, *26*(3–4), 299–323. doi:10.1080/00461520.1991.9653136

Schiefele, U., Schaffner, E., Möller, J., & Wigfield, A. (2012). Dimensions of reading motivation and their relation to reading behavior and competence. *Reading Research Quarterly*, *47*(4), 427–463. doi:10.1002/rrq.030

Smith, J., Smith, L., Gilmore, A., & Jameson, M. (2012). Students' self-perception of reading ability, enjoyment of reading and reading achievement. *Learning and Individual Differences*, *22*(2), 202–206. doi:10.1016/j.lindif.2011.04.010

Stutz, F., Schaffner, E., & Schiefele, U. (2016). Relations among reading motivation, reading amount, and reading comprehension in the early elementary grades. *Learning and Individual Differences*, *45*, 101–113. doi:10.1016/j.lindif.2015.11.022

Troyer, M., Kim, J., Hale, E., Wantchekon, K., & Armstrong, C. (2018). Relations among intrinsic and extrinsic reading motivation, reading amount, and comprehension: A conceptual replication. *Reading and Writing*. doi:10.1007/s11145–018–9907–9

Wirtz, M. A., & Caspar, F. (2002). *Beurteilerübereinstimmung und Beurteilerreliabilität: Methoden zur Bestimmung und Verbesserung der Zuverlässigkeit von Einschätzungen mittels Kategoriensystemen und Ratingskalen* [Interrater agreement and reliability: Methods for determining and improving the trustworthiness of assessments using categorization systems and rating scales]. Göttingen, Germany: Hogrefe, Verlag für Psychologie.

## Authors

FRANZISKA MARIA LOCHER is a doctoral researcher at the Department of Educational Research and at the Bamberg Graduate School of Social Sciences. Her research interests include development of student reading skills, reading behavior, and (reading) motivation.

SARAH BECKER is a doctoral researcher at the Department of Educational Research and at the Bamberg Graduate School of Social Sciences. Her research interests include development of student motivational behavior, stage-environment fit, and postschool transitions.

MAXIMILIAN PFOST is professor at the Department of Educational Research at the University of Bamberg, Germany. His main research interests include reading and emergent literacy skills, student motivation, and the role of schools and families for competence development.