Chapter

Benefits and Constraints of Parent Involvement in Children's Reading Promotion: General Research Trends and Evidence from a Swiss Paired Reading Intervention Study

Caroline Villiger

Abstract

This chapter focuses on the benefits and constraints of parent involvement in children's reading promotion. The first part reviews the existing literature about the effectiveness of parent involvement in reading programs and identifies general trends of research findings. Given the fact that empirical evidence about the effectiveness of reading programs with parents is rather vague, usually lacking information about implementation fidelity, some explorative investigations about factors that might explain training success are presented in the second part. The investigations are based on data from a Swiss Paired Reading study where implementation fidelity was exhaustively examined. Children with very big gain (n = 20) and very little gain (n = 17) in reading fluency were compared regarding diverse aspects: child characteristics, parent characteristics (family background), and implementation factors. Results reveal that children benefiting from the reading program attached higher importance to reading in general, they read more in spare time and they reported higher effort during the training. The number of books at home also revealed to be a determinant factor. Yet, implementation factors gave no reason for explaining differences in improvement. The study discusses beneficial circumstances of parent involvement in reading programs.

Keywords: reading programs, parent involvement, effectiveness, struggling readers, paired reading, Grade 3, training success

1. Introduction

During school age, a considerable part of parenting consists in offering help for homework or other school-related matters. School relies much on this kind of support parents give to their children in everyday life. Parents are propitious persons to meet the individual needs of their child, and compared to school, family environment facilitates highly adaptive and intense one-to-one interaction with the child [1]. Parents usually consider it as their duty to help their child and, therefore, respond positively to invitations either from the school, teacher, or child [2]. Moreover, given the fact that reading is crucial for a successful and

fulfilled life [3], parents see it as a particular benefit to help their child develop his or her reading competence [4].

However, parental help for academic work is not unproblematic. First, parents usually lack the necessary content knowledge and pedagogical skills [4, 5]. Second, impulsiveness is higher in family than in school context, which easily can result in conflicts. Research showed that conflicts arise more frequently in families with struggling students (who need help most), sometimes due to bad grades or excessive academic expectations [6]. "Teaching-learning" situations are considered to be atypical at home, and they may disrupt sensitive parent-child relations if they occur too regularly with conflicts [7]. Finally, conflicts with parents can even have a negative impact on the child's achievement [8].

Given this controversy about benefits of parental help in school-related settings, this chapter gives an overview of contemporary trends in empirical research about parent involvement in reading promotion. The focus lies on investigating the effectiveness of parental support in reading, and more specifically, in training methods like Paired Reading (PR) [9]. Favorable aspects for successful training are explored based on data from a recent PR study [10].

2. Impacts of parent involvement in reading programs

It is widely acknowledged that family background has an impact on the child's reading achievement [3]. The most important background factors that are associated with academic achievement are socio-economic status, parents' educational level, and migration background. In addition to those distal factors, proximal factors, such as cultural practices, parent-child communication, or number of books at home, are as much as significant [4, 11]. Therefore, there is much evidence to assume that family effects on reading are existent even without any planned efforts through intervention. But how about reading interventions that involve parents actively? In the following, an overview on recent literature about the effectiveness of reading programs involving parents is presented.

2.1 Effectiveness of reading programs involving parents

Research on parent tutoring has been reported since the 1970s, but reviews usually found severe design problems and limited descriptions of intervention characteristics in earlier studies [12]. Recent studies and meta-analyses have been much more rigorous, this applies also to the domain of reading promotion. Most of the reading programs that involve parents are subsumed under the term "family literacy programs." Family literacy programs basically aim at extending literacy experiences and improving reading of children outside school to prevent delays in children's literacy development [13]. They emphasize the intergenerational character of language and literacy learning to acquire skills and cultural practices valued in the community. However, the field of such programs is quite large, and programs can include a broad range of activities and address different target groups. An important number of family literacy programs focuses on preschool children and include activities such as shared book reading [14]. Though, there are some programs that focus on children at school (formal education), sometimes establishing a cooperation between home and school.

2.1.1 Meta-analyses on studies at preschool

The meta-analysis of [15] focusing on parent-preschooler reading (joint-book reading activities) found an overall effect size of $d = 0.59$ for language growth,

emergent literacy, and reading achievement on a basis of 34 studies. The effects did not depend on socio-economic status of families or on methodological features of the reviewed studies. Reference [16] that reviewed 16 studies on dialogic book reading with preschool children showed moderate effects on vocabulary, but only for very young children (under 4 years) and for children who were not at risk for language impairments. The meta-analysis of [17] also focused on 15 family literacy programs in early childhood (preschool) and reported overall weak effects on code-related (d = 0.24) and comprehension-related (d = 0.17) measures. The authors found that studies that were methodologically less sound (e.g., no randomization) had generally higher effects. Other moderator analyses testing differential effects due to program or study features showed no significant differences. The meta-analysis of [18] focused on 67 interventions promoting word-learning and vocabulary at preschool and kindergarten. The effect size for instructions provided by parents was d = 0.76. Finally, a work of [19] focused on bilingual family literacy programs reporting the effects of three studies, most of them conducted with preschool children. Given the limited number of studies, they did not conduct a meta-analysis but still highlighted the potential and importance of bilingual family literacy programs in a world of transnational movement.

2.1.2 Meta-analyses for formal (primary) education

So-called family literacy programs at primary school are infrequent. To our knowledge, there is only the meta-analysis of [12] that focused on parent tutoring in reading at primary level. The author investigated a total of 37 studies differentiating between group and single-subject studies. In most cases, outcome variables were reading fluency, word recognition, reading comprehension, or mixed measures. The mean weighted effect size for group design studies was d = 0.55, and for single-subject studies, the median percentage of non-overlapping data (PND) was 94%, which can be interpreted as very effective [12]. Only one treatment characteristic (length of training) moderated the outcome, the others which were examined (written instruction, modeling, supervised practice, duration of training session, opportunities for consultation, and monitoring) did not. Likewise, study features such as grade, skill area, and the type of assessment were investigated as possible moderators of outcome, without any effects found.

2.1.3 Meta-analyses focusing on both preschool and formal education

A few meta-analyses included studies of both preschool and formal education level. Sénéchal and Young [14] reviewed 16 studies on parent-child reading activities from kindergarten to Grade 3 and differentiated between (a) parents reading to their children (d = 0.18), (b) parents listening to their children read (d = 0.52), and (c) parents tutoring their children in specific reading skills (d = 1.15). Moreover, the authors found that the more children and parents were actively involved in the activities (e.g., dialogic reading), the higher were the effects. However, the duration of the intervention, reading level of children, and socio-economic background did not moderate effectiveness. Another meta-analysis of [13] including 30 studies on family literacy programs found a small but significant overall effect of d = 0.20 on reading skills. Effects on comprehension-related skills were a bit higher than on code-related skills (decoding and fluency). Programs at primary school level were more effective than at preschool. Again, randomized studies showed lower effects.

To sum up, the meta-analyses investigating the overall effects of family literacy programs globally indicate rather heterogeneous findings going from small ($d \geq 0.20$) to high effects ($d \geq 0.80$), certainly due to diverse methodological

procedures and study basis. However, there is a tendency that recent studies show lower effects because of stronger orientation on school practice and higher methodological standards [20]. A more recent study of [21] that fulfills high standards of methodology (quasi-experimental design, controlling for cognitive abilities, and family background variables) with N = 713 primary students (Grade 4) found effects on reading motivation for one part of the sample that involved parents into the reading homework, but no effects on reading comprehension or reading self-concept were found. A Canadian study that involved parents in a summer book reading program with students from Grades 3 and 5 found moderate effects on reading comprehension, fluency, and receptive vocabulary [22]. A recent German study found small, but significant effects on reading comprehension of first graders and moreover detected positive effects on parent self-efficacy beliefs [23]. Some studies highlight the importance of emotional aspects when parents read with their child. For example, [24] found that affective quality of shared reading in the first grade contributed significantly to the child's reading of challenging texts in the third grade. Thus, it seems to be crucial in which way parents interact with their child during reading activities ([25, 26] see Section 3.2). Furthermore, there is evidence to believe that family literacy programs, without explicitly addressing children's behavior, may equally have a significant impact on the social-emotional development of children [27].

2.2 Effectiveness of Paired Reading (PR) with parent tutors

PR, developed by Topping [28], is a method that focuses on training reading fluency, which is considered to be a precondition for acquiring reading comprehension [29, 30]. The method consists of guided oral reading in a one-to-one tutoring, which is particularly beneficial for struggling readers. The procedure of the training is highly structured, integrates error correction, and it takes also into account the importance of motivation in learning by offering the child the possibility of self-initiated sequences of reading alone [31]. Furthermore, the tutor gives positive feedback whenever the child reads a difficult word successfully, which enhances learning [32]. PR is ideal for reading promotion in the family environment, in case, parents receive training in advance—a prerequisite which accounts for any type of reading program [33, 34].

The only systematic literature review on PR at elementary school level was conducted by Topping and Lindsay [35], however, without specifying tutor type (parent/volunteer) or reading ability of the target group. The authors reported overall positive effects on reading accuracy and comprehension (in terms of mean ratio gains); however, many studies did not have an experimental design and if so, the effects were smaller. Though, many of the reviewed studies lacked in detailed description of methods (training course yes or no, duration of program, target group, etc.), which makes it difficult to draw conclusions for practice. In a more recent publication, [36] reported mean effect sizes for parent tutored projects of d = 1.6 (accuracy) and d = 1.4 (comprehension).

Recent studies about PR with parent tutors have a sounder methodological basis (all of them have an experimental design), and some provide information about child and family characteristics and/or aspects of implementation. In general, the authors reported positive effects of PR conducted by parents. A South African study found increased reading accuracy and comprehension for fourth graders struggling with reading [37]; a Chinese study reported better word recognition and reading fluency for preschool children [38]; a Canadian study detected effects on general academic abilities and phonological awareness but no effects on reading

ability at kindergarten level [39]; a US American study with second, third, or fourth graders struggling with reading only found effects on reading accuracy, rate, and comprehension for children who completed the training as intended (n = 7) [40]; and finally, our own study comparing parent and volunteer tutors (N = 198 third graders) revealed only effects of the volunteers' group on reading fluency (d = 0.21); however, the effects did not last at follow-up (5 months after posttest). Thus, children who trained with parent tutors did not develop significantly better than the control group [10].

2.3 Evidence from the revisited literature

The aim of this literature review is to give an overview on research about family reading programs, and more specifically, about PR, without reporting details of each work. What this review brings to light though is that it is difficult to establish conclusions about the effectiveness of parents' activities to promote reading of their children. In sum, meta-analyses have brought evidence for the effectiveness of parental involvement in reading promotion and mostly report small, but significant effects. However, those meta-analyses are usually based on studies with diverse program characteristics (age, target group, type of program, duration, etc.) and substantial methodological discrepancies among the studies (small sample size, self-selected samples, lack of random assignments to conditions, etc.). Furthermore, implementation quality (quality of instruction and implementation check) was hardly ever considered in those studies [41], although it is assumed that the participants of a program conduct it in quite different ways [42]. Thus, the effects need to be interpreted with care; the variability in implementation fidelity might partly be responsible for the wide variability in the effects found [43]. Moreover, providing evidence for differential effects between programs (e.g., program/training duration) is somehow problematic, if implementation fidelity has not been considered [44].

Possibly, well-instructed parents can conduct reading programs successfully, but in the light of the problematic aspects of parent involvement in academic work highlighted in the introduction, a careful consideration of individual prerequisites and processes of program implementation that could explain training success (or failure) is needed. Understanding which specific factors are likely to lead to a successful training outcome would help to implement parent reading programs in a more purposeful way.

3. Investigating relevant factors for training success

To date, little is known about differential effects of reading programs involving parents; only a few studies investigated factors that moderated program outcomes. In the following, findings of previous studies about differential effects are gathered and completed by assumptions that can be deduced from widely recognized theories or evidence-based findings about the factors that foster learning, distinguishing between child characteristics, parent characteristics, and implementation factors (for an overview, see **Table 1**).

3.1 Child characteristics

Do effects of parent reading programs depend on the child's reading performance? There is quite a broad evidence about individual differences in the

Domain	Theoretical concept	Literature
Child characteristics	Initial reading level	[45, 46]
	Reading motivation	[47, 48]
	Reading frequency	[49]
	Utility value (e.g., importance of reading)	[50, 51]
	Effort/volition	[52, 53]
Parent characteristics	Socio-economic and occupational status	[3, 41, 43]
	Cultural capital (e.g., number of books)	[3, 54]
	Expectations regarding the child's reading ability	[55–57]
	Expectations regarding the training success	[4]
Implementation	Intensity of training	[33]
	Implementation fidelity (is the program implemented as intended—technical and motivational aspects; scaffolding)	[32, 44, 58, 59]

Table 1.
Supposed differential effects for child characteristics, parent characteristics, and implementation factors.

acquisition of literacy between good and poor readers [45, 46]; but we do not know much about differential effects of programs depending on the child's reading level. One meta-analysis focusing on preschool level reported moderate, but substantially reduced effect sizes when children were at risk for language impairments [16]. In our own study comparing parent and volunteer tutors' effectiveness in a PR training for children with poor reading fluency[1], we only found differential effects in the volunteer condition, saying that children with an initially higher reading level benefitted more from the training (at posttest: $d = 0.47$; at 5-month follow-up: $d = 0.39$). However, this effect could not be found within the parent group [10].

Besides the initial reading level, it is assumable that the child's general disposition toward reading, which can be reflected in reading motivation and reading frequency during spare time, is relevant for training success. Knowing that reading performance and motivation correlate in a moderate way, we can assume that poor readers are not very motivated readers and thus do not necessarily read for pleasure [47, 48]. Though, if there *are* differences among struggling readers, possibly children who are more motivated readers and read more frequently would benefit more from a training. This assumption is supported by a study that found reading behavior to be a critical variable in explaining differential pathways in reading competence development [49]. Furthermore, perceived utility values like the importance that a child attaches to reading might be beneficial for training outcome [50]. When specifically addressed within interventions (by reflecting personal relevance of a matter for future; in this particular case: math), utility values even turned out to be an important factor to foster self-concept and achievement [51]. Thus, it is assumable that children with higher utility values attributed to reading might benefit more from the training. Always in relation with motivational aspects mentioned previously, it is relevant which effort one puts into a task. The role of volition in learning has been studied in detail by many scholars (e.g., [52, 53]) but still seems to be much neglected in learning situations. However, in reading programs, and particularly

[1] Children with dyslexia were not supposed to participate.

in family context, the volitional disposition of the child is a crucial factor that might explain training success or failure.

3.2 Parent characteristics

The empirical evidence whether parent characteristics might be responsible for differential effects of reading programs conducted by parents is unclear. Several researchers (e.g., [6, 43, 54]) investigated the assumption that high-SES parents might be more skilled in implementing family literacy programs than low-SES parents, because they are more likely to dispose of the required strategies (e.g., sensitivity and responsiveness) [26]. However, findings are inconsistent [41]. Studies that examined differential effects of SES found that SES or family income did not moderate program effects [15, 38] (both at preschool level). Still, the empirical evidence is scanty, and further research, especially for primary school level, is clearly needed. Associated factors, related to the family background, might be the parents' occupational status and cultural capital [1, 55]. Besides these factors, proximal factors such as parental expectations play a prominent role in predicting child achievement (e.g., [56–58]). The extent to which parental expectations moderate training effects is a question that still needs to be investigated. At least one study showed that parental expectations regarding the training success was significantly higher for parents of children with lower reading performance [4]. Whether higher expectations moderate training success still need though to be empirically established.

3.3 Implementation factors

The impact of implementation fidelity on program effectiveness has already been discussed previously. Thus, differential effects on training success can be expected from implementation factors like the total instructional time or number of training sessions held (intensity/duration of training), or other aspects of program content (is the program implemented as intended?). However, previous research showed that higher training intensity (in terms of quantity of training sessions) or duration of training (in terms of weeks or months) is not necessarily associated with training success [33, 59]. In our own study, the number of training sessions was not a significant predictor of reading outcomes nor did it moderate them [10]. This finding is in line with some meta-analyses [14, 17], but not solely (e.g., length of training moderated outcome [12]). Besides this, little is known about the aspects of implementation fidelity other than intensity that would explain program success, especially in reading programs involving parents. A peer and cross-age tutoring PR study that investigated this topic revealed no significant positive correlation between any core element of PR implementation and progress in attainment [60]. However, implementation that considers motivational aspects of learning (e.g., provide positive feedback) [32] actively involves the child into reading activities [14] and applies thoroughly scaffolded tutoring procedures (Cohen et al. in Topping et al. in [60, 61], p. 241) that are supposed to foster reading, presumably would bring higher training effects.

Altogether, the question about relevant factors for training success in programs that involve parents is still much of a mystery. To date, only few studies investigated differential effects within family literacy programs. Therefore, in the following, the previously presented assumptions about possible factors that explain training success will be explored on data of a PR study with third graders.

4. Explorative investigations on data of a Swiss PR study[2]

The investigated data are derived from an extracurricular PR study with third grade students (N = 198) conducted in Switzerland from 2014 to 2015. The target group consisted of students struggling with reading fluency who were determined as "in need for training" by means of a standardized screening test and by their teachers' perception. A randomized control field trial with two experimental groups (parent tutors and volunteer tutors) was conducted (pretest, posttest, and follow-up). The findings showed that children who trained with volunteer tutors developed significantly better reading fluency after 20 weeks compared to the children with parent tutors and control group [10]. Great efforts were put into checking treatment fidelity, by collecting self-reported data (questionnaires and record books), and observational data (video-taped). Most of the participants conducted the training as intended. However, the variability of implementation fidelity among the participants was rather high, also among parent tutors [42]. Moreover, some children with parent tutors still showed high gain in reading fluency. Therefore, the present investigations focus on possible differences between students within this condition (parent tutor) with very low and very high gain in reading fluency. The following research questions are addressed:

1. Do students with very little and very big gain in reading fluency differ in relevant child characteristics?

2. Do their parents differ in relevant characteristics such as family background variables and expectations?

3. Do the training intensity and implementation fidelity of the two groups differ?

5. Method

5.1 Sample

The present investigations focus on students who conducted the training in the parents' condition. N = 67 students at Grade 3 did the PR training with a parent tutor (57 with their mother, 7 with their father, 2 with another legal guardian, and 1 student with missing information). Fifty-six pairs met the basic requirement of having conducted at least 40 training sessions, and therefore, were considered for the following analyses. The students were divided into terciles according to their gain in reading fluency. Reading fluency was measured with a standardized German test called LDL ([62]; see Section 5.2.1). The students read the same text at each measurement points. The test counts the correctly read words within 1 minute. Reading gain was calculated as the difference between the individual raw score at pretest and posttest (Min. = −2, Max = 47, M = 13.68, SD = 10.20). To address the above research questions, the group with very little gain (tercile 1, n = 20) and the one with very big gain in

[2] I wish to mention at this point my esteemed colleagues who were actively involved in this research project: Annette Tettenborn, Alois Niggli, Silke Hauri, Catherine Näpflin, Isabelle Hugener, Erich Hartmann, and Kathrin Krammer.

	Tercile 1 Little gain in reading fluency ($N = 20$)	Tercile 3 Big gain in reading fluency ($N = 17$)	Statistical comparison
Sex (male)	65.0%	76.5%	$z = -0.75$, $p = 0.45$
Age	8.83	8.83	$z = -0.29$, $p = 0.77$
Reading fluency T1	31.50	36.00	$z = -0.81$, $p = 0.42$
Reading fluency T2	37.00	63.00	**$z = -4.55$, $p < 0.00$**
Vocabulary T1[1]	32.50	33.00	$z = -1.03$, $p = 0.30$
Cognitive abilities T1[2]	62.50	66.00	$z = -0.06$, $p = 0.95$

[1] *Assessed by a subtest of the standardized SET 5–10 [63].*
[2] *Assessed by non-verbal test called CFT 1-R [64].*

Table 2.
Descriptive data of the two groups (little and big gain in reading fluency).

reading fluency (tercile 3, $n = 17$) will be compared. **Table 2** shows the results of a statistical comparison of relevant child characteristics of the two groups. In the total sample ($N = 198$), boys were overrepresented (62.1%). The percentage of boys in this subgroup is even higher (see **Table 2**). Whereas the groups do not differ in reading fluency at pretest (T1), they significantly do at posttest. No significant differences were found for any other individual characteristic relevant for reading development.

5.2 Instruments

In the following, instruments used for measuring aspects, which are supposed to be responsible for differential effects on training success, are presented.

5.2.1 Child characteristics

5.2.1.1 Reading level at pretest

The assessment of the reading level at pretest relied on the standardized test LDL [62]. The instrument used for assessing reading fluency was already presented (see Section 5.1).

5.2.1.2 Reading motivation

Several aspects of reading motivation were measured. For this comparison, the dimension of achievement-oriented reading motivation was used (e.g., "I read to get better in reading"; four-point Likert-type scale, according to an earlier version of the scale published in [65]). The scale showed a satisfactory reliability with Cohen's $\alpha = 0.80$.

5.2.1.3 Reading frequency

The children reported on their reading behavior during spare time with a single item on a three-point Likert-type scale ("How often do you read in your spare time?"). The item was self-constructed (1 = almost never or never; 2 = about once a week; and 3 = almost every day).

5.2.1.4 Importance of reading

The utility value children attached to being a good reader was measured on a four-point Likert-type scale with a single item ("To be a good reader is important"), also based on an earlier version of the scales published in [65].

5.2.1.5 Self-reported effort

Three times during the intervention, children reported in a short questionnaire at school on a four-point Likert-type scale the effort which they had put into the last training session (self-constructed item: "I made an effort to participate actively during the training session"). Of the three reported measures, a mean value was built.

5.2.2 Parent characteristics

5.2.2.1 Socio-economic background of parents

Before the training started, parents reported in a questionnaire the professional occupation of the child's mother and father. Each parent was attributed an index according to a standardized classification of occupations (International Socio-Economic Index, cf., [66]). For analyses, the highest index between the parents was used (HISEI).

5.2.2.2 Number of books at home

In addition to the socio-economic background, parents also provided an estimation of the quantity of books in their home, which allows getting an idea of the cultural capital of the family. In response to the question "How many books do you approximately have at home?", parents could choose among the following four categories: 1 = 0–10, 2 = 11–50, 3 = 51–100, and 4 = more than 100 books (cf., [67]).

5.2.2.3 Parents' expectations

This measure refers to expectations regarding the child's general reading proficiency and expectations regarding the training success. The first one was assessed by an item adapted from Helmke and colleagues' parent questionnaire [68] ("What expectations do you have toward your child's reading proficiency?") with five possible answers ranging from 1 = "It is sufficient if my child gets by in reading" to 5 = "He/she should be a top reader." Expectations regarding the training success were measured by a self-constructed item ("This PR program helps to improve reading" (four-point Likert scale).

5.2.3 Implementation factors

5.2.3.1 Training intensity

The parent tutors provided the total number of training sessions by means of a record book (each training session was noted). About 83.6% of the pairs (children with parent tutors) met the basic requirement of having conducted at least 40 training sessions. Pairs who did not meet this requirement were excluded from the analyses.

5.2.3.2 Implementation fidelity

To measure implementation fidelity, observational process data were used (video tapes). A video of one training session of almost each pair was available (parent tutor condition: n = 54 of 67 pairs in total, in the reduced sample for group comparison: n = 28 of 37 pairs). Aspects of treatment fidelity were coded by means of low and high inference category systems. Two independent and reliable coders were involved (intercoder agreement: >85.0%; generalizability coefficient: >0.92) [69]. The aspects reported here are core elements of the PR method: guided oral reading (proportional amount of reading together simultaneously), error self-correction (proportional amount of error correction with possibility for the child to correct himself/herself), synchronicity speed (high inference coding ranging from 1 = very low synchronicity to 4 = very high synchronicity in reading), and positive feedback (dummy-coded, 0 = no positive feedback at all during training, 1 = parent gives one or several times positive feedback).

6. Results

6.1 Intercorrelations

In a first step, intercorrelations were calculated to investigate the associations between gains in reading fluency (pretest to posttest) and child and parent characteristics. For this analysis, the sample of children who had trained with parent tutors and conducted at least 40 training sessions was used (n = 56). The variables that correlated with *gains in reading* were *reading frequency* (r = 0.35, p = 0.012), *importance of reading* (r = 0.32, p = 0.016), and *child's effort* (r = 0.35, p = 0.009). Other statistically significant correlations were found between the *importance of reading* and *reading frequency* (r = 0.46, p = 0.001), *importance of reading* and *reading motivation* (r = 0.45, p = 0.000458), *number of training sessions* and *reading frequency* (r = .34, p = 0.015), and finally *parents' occupational status* and *number of books at home* (r = 0.42, p = 0.001). *Parental expectations toward the child's reading* are significantly, but negatively associated with the *amount of guided oral reading* (r = −0.36, p = 0.019), the *expectations toward training success*, and the *number of training sessions* correlated positively (r = 0.30, p = 0.027).

6.2 Comparative analyses between children with little and big gain in reading fluency

In order to address the research questions, comparative analyses were conducted with children who showed very little gain (n = 20) and very big gain in reading fluency (n = 17) (see **Table 3**). The two groups were compared in regard of several characteristics and factors relevant for training success (see Section 3 of this chapter). For this purpose, the non-parametric Mann-Whitney U test was applied, usually used for variables that are not normally distributed.

The results presented in **Table 3** show that children with high training success read considerably more during spare time and attached more importance to being a good reader than their counterparts who did not benefit a lot from the training. Furthermore, they reported clearly higher values for the effort they made during the training sessions. The three comparisons represent medium to strong effect sizes. The groups did not differ in the initial reading level or in reading motivation (achievement-oriented). As for the parent characteristics, the two groups differed considerably in the number of books at home. However, no explicit differences were

	Little gain in RF Median (*n* = 20)	**Big gain in RF Median (*n* = 17)**	**Statistical comparison (Mann-Whitney *U* test)**	**Effect size (Pearson's *r*)**
Child characteristics				
Reading fluency T1 (*n* = 37)	31.50	36.00	$z = -0.81, p = 0.42$	0.13
Reading motivation T1 (*n* = 37)	3.50	3.50	$z = -0.50, p = 0.61$	0.08
Reading frequency T1 (*n* = 33)	2.00	3.00	**$z = -2.24, p = 0.02$**	**0.39**
Importance of reading T1 (*n* = 37)	3.00	4.00	**$z = -1.98, p = 0.05$**	**0.33**
Self-reported effort (*n* = 36)	3.33	3.67	**$z = -2.86, p < 0.00$**	**0.48**
Parent characteristics				
[1]HISEI (*n* = 37)	52.00	52.00	$z = -0.95, p = 0.34$	0.16
Number of books at home (*n* = 37)	3.00	4.00	**$z = -2.09, p = 0.04$**	**0.34**
Expectation toward child's reading T1 (*n* = 31)	3.00	3.00	$z = -0.69, p = 0.49$	0.12
Expectation toward the training T1 (*n* = 35)	4.00	4.00	$z = -0.36, p = 0.71$	0.06
Implementation factors				
Intensity (no. of training sessions) (*n* = 37)	51.00	52.00	$z = -0.70, p = 0.48$	0.11
Guided oral reading (*n* = 28)	0.73	0.76	$z = -0.32, p = 0.75$	0.06
Self-correction (*n* = 28)	0.43	0.45	$z = -0.25, p = 0.80$	0.05
Synchronicity speed (*n* = 27)	4.00	3.25	$z = -0.80, p = 0.42$	0.15
Positive feedback (*n* = 28)	1.00	1.00	$z = -0.28, p = 0.78$	0.05

[1]*HISEI, parents' Highest International Socio-Economic Index.*

Table 3.
Between-group analyses: children with little and big gain in reading fluency (RF).

found between parents' expectations toward the child's reading skills or success. Also, parents of the two groups did not differ in their occupational status. When it comes to implementation factors, no difference was found between the groups. Thus, none of the investigated aspects of implementation gives explanation for training success.

The conducted analyses are explorative; therefore, no correction for multiple testing was used. Even the difference found for self-reported effort would have, scarcely though, missed the required significance level of $p < .004$. However, in explorative procedures, correction for multiple testing is not systematically requested, but it must be considered that statistical significance could be at random.

Subsequently, we tested whether the variables which showed significant differences would moderate training outcome. For this purpose, we run regression analyses with the total sample (intervention $n = 56$, control $n = 67$) predicting reading fluency at posttest and controlled for initial reading fluency, cognitive abilities, vocabulary, and parents' occupational status (HISEI). Children of the intervention group (training with parent tutors) were compared to the control group (dummy

variable). However, when each of the variables (reading frequency, importance of reading, and number of books, except for self-reported effort because no data available of the control group) were introduced separately into the model, and additionally, interaction terms with the intervention group were built, no moderator effect for any of the four variables could be found.

7. Discussion of the results

The here presented explorative investigations about the factors that possibly explain training success in the family context try to scrutinize the benefits of parents acting in reading promotion. For this purpose, aspects of three domains aspects of three domains were examined: child characteristics, parent characteristics (family background), and implementation factors. First of all, the findings indicate that the training success obviously depends on the child's disposition who receives the training (child characteristics). This is not a surprising, but still neglected aspect when the effectiveness of reading programs is investigated—this accounts for any kind of reading program, not only programs involving parents. Thus, it is important that people who deliver a reading program should work on the children's utility values before and during the program (e.g., the study of [51]). Possibly, benefits would be higher if other people than the parent (e.g., program deliverer, teacher, etc.) explain to the child why reading is important for life, unless parents themselves really are committed to this. As the child's effort appeared to be a relevant factor for training success too, it would be worth developing strategies to stimulate effort. One possibility is to adapt training rhythm (e.g., duration of each training session) in order to avoid fatigue and unproductiveness. Another could be to use strategies that motivate the child to make an effort during the training session [21, 70]. The factor "reading frequency" is probably more difficult to address in interventions. High reading frequency probably acts as a precursor and reflects the willingness of spending time with reading, which in turn moderates the gains in reading competence [49]. Though, willingness represents an individual disposition, which is more complex to address.

As for the lacking differential effects due to initial reading level, this finding replicates the results found with the total sample of the intervention program (cf., [10]). It can be interpreted that the severity of reading difficulties makes no difference for training success when parents act as tutors, this counts at least for struggling readers such as in our sample. However, the objective of any intervention to foster the most struggling students could not be attained. Thus, this finding raises doubts about the effectiveness of parents helping their struggling child (cf., [6, 7]).

Interestingly, among the parent characteristics, only the number of books at home was clearly different for the children with little and high gain in reading fluency. However, the same result could not be found for parent's occupational status which is also a relevant aspect of family background and was even associated with the quantity of books. Therefore, our findings reflect the discrepancy of the findings of earlier studies about this matter [41]. Nevertheless, it is possible that the number of books expresses a favorable attitude toward reading which in turn is beneficial for training success, whereas this benefit is not necessarily given with a higher occupational status. Furthermore, even though it is widely acknowledged that parents' expectations influence children's academic outcomes, no differential effect of expectations on training success was found. Parents' expectations were equally high in both groups. However, this information was reported by parents before the training started. Presumably, expectations change during the training according to the progress or stagnation of the child's reading skills.

Finally, none of the implementation factors turned out to be relevant for explaining training success. Apparently, the technical aspects as much as the intensity of conducting a training seem not to be crucial factors. Even the variable "positive feedback" which is supposed to promote a motivating climate did not reveal a considerable difference between the two groups. The objective to provide evidence for training success in relation with implementation fidelity remains still a big concern of intervention research (see [60]).

Even though differences between the two groups are discussed, it must be remembered that no interaction effects could be found. Thus, the interpretations remain vague. Further investigations are clearly needed. Of course, training success surely does not depend on single factors. Rather, we suppose an entirety of factors leading to training success. To verify this, large sample sizes are needed, which is challenging in intervention studies. Moreover, the initial reading ability of the children (e.g., struggling vs. normal readers) must absolutely be considered; it is supposed that particularly struggling readers at primary school level and above might not benefit from conducting a training with their parents. After all, expectations toward parents' effectiveness should probably be relativized in the light of the current state of research presented above (see also our own study comparing parent and volunteer tutors: [10]).

8. Conclusions

This chapter reviews the existing literature about the effectiveness of reading programs involving parents and investigates explanation for training success within a Swiss Paired Reading study. The chapter shall contribute to gain a better understanding of benefits and constraints to promote reading in the family environment. To date, only few studies investigated differential effects of reading programs that involved parents.

Altogether, research literature presents small, but significant effects of programs that involve parents to promote their child's emergent literacy and/or reading skills. However, the findings must be interpreted with caution because many studies evaluated within meta-analyses show methodological weaknesses and implementation fidelity is often neglected. Hence, there is a need for more research on such kind of reading programs that follow high standards of field research [71] and evaluate programs before, during, and after implementation [72]. Data of our PR study identified some possible factors that explain training success: the importance the child attaches to reading competence, the child's self-reported effort, reading frequency during spare time, and the number of books at the family's home. However, the relevance of these factors still needs to be verified with larger samples.

To sum up, the effectiveness of parents in reading programs is still questionable. Obviously, the direct impact of parental activities on academic outcomes is small, particularly for struggling readers [10]. However, parental activities that offer children a stimulating learning environment and rich literacy experiences *before* entering school can have sustained effects [73–75]. Moreover, reading activities at preschool level are not shaped yet by achievement-oriented objectives, but they are embedded in a more supportive and affective context (e.g., shared book reading), which fits the family context better. Instead, at primary school, parents are more focused on achievement and are likely to exert more pressure in case of low achievement level, which creates unfavorable conditions for learning. By all means, reading programs that involve parents need to carefully examine child characteristics as much as parental aspects, in order to ponder whether the activities could realistically lead to program success.

Acknowledgements

This research was funded by the Swiss National Science Foundation (project no. 149560) and the Universities of Teacher Education of Fribourg, Lucerne, and Bern in Switzerland. A special thank goes to the University of Teacher Education Bern for financial support of this publication. The author wishes to thank the parent tutors and students for making this research possible. Gratitude is also expressed to people who were involved in editorial assistance (Nadine Schuler, Anna Hostettler), statistical support (Loredana Torchetti), and testing and data entry staff.

Author details

Caroline Villiger
University of Teacher Training Bern, Bern, Switzerland

*Address all correspondence to: caroline.villiger@phbern.ch

References

[1] McElvany N, Artelt C. Systematic reading training in the family: Development, implementation, and initial evaluation of the Berlin parent-child Reading program. Learning and Instruction. 2009;**19**:79-95. DOI: 10.1016/j.learninstruc.2008.02.002

[2] Hoover-Dempsey KV, Walker JM, Sandler HM, Whetsel D, Green CL, Wilkins AS, et al. Why do parents become involved? Research findings and implications. The Elementary School Journal. 2005;**106**(2):105-130. DOI: 10.1086/499194

[3] OECD. Knowledge and Skills for Life: First Results from PISA 2000 [Internet]. 2001. Paris: OECD. Available from: https://www.oecd-ilibrary.org/education/knowledge-and-skills-for-life_9789264195905-en [Accessed: 14 March 2020]

[4] McElvany N. Förderung von Lesekompetenz im Kontext der Familie [Fostering reading skills in family environment]. Waxmann: Münster; 2008

[5] Hoover-Dempsey KV, Sandler HM. Why do parents become involved in their children's education? Review of Educational Research. 1997;**67**:3-42. DOI: 10.3102/00346543067001003

[6] Moroni S, Dumont H, Trautwein U. Keine Hausaufgaben ohne Streit? Eine empirische Untersuchung zu Praediktoren von Streit wegen Hausaufgaben [No homework without conflict? An empirical study on predictors of conflict because of homework]. Psychologie in Erziehung und Unterricht. 2016;**2**:91-106. DOI: 10.2378/peu2016.art12d

[7] Grolnick WS. The Psychology of Parental Control: How Well-Meant Parenting Backfires. Mahwah: Erlbaum; 2003

[8] Cooper H, Lindsay JJ, Nye B. Homework in the home: How student, family, and parenting-style differences relate to the homework process. Contemporary Educational Psychology. 2000;**25**(4):464-487. DOI: 10.1006/ceps.1999.1036

[9] Topping KJ. Thinking Reading Writing. A Practical Guide to Paired Learning with Peers, Parents and Volunteers. London: Continuum; 2001

[10] Villiger C, Hauri S, Tettenborn A, Hartmann E, Naepflin C, Hugener I, et al. Effectiveness of an extracurricular program for struggling readers: A comparative study with parent tutors and volunteer tutors. Learning and Instruction. 2019;**60**:54-65. DOI: 10.1016/j.learninstruc.2018.11.004

[11] van Steensel R. Relations between socio-cultural factors, the home literacy environment and children's literacy development in the first years of primary education. Journal of Research in Reading. 2006;**29**(4):367-382. DOI: 10.1111/j.1467-9817.2006.00301.x

[12] Erion J. Parent tutoring: A meta-analysis. Education and Treatment of Children. 2006;**29**(1):79-106

[13] van Steensel R, McElvany N, Kurvers J, Herppic S. How effective are family literacy programs? Results of a meta-analysis. Review of Educational Research. 2011;**81**:69-96. DOI: 10.3102/0034654310388819

[14] Sénéchal M, Young L. The effect of family literacy interventions on children's acquisition of reading from kindergarten to grade 3: A meta-analytic review. Review of Educational Research. 2008;**78**(4):880-907. DOI: 10.3102/0034654308320319

[15] Bus AG, van Ijzendoorn MH, Pellegrini AD. Joint book reading

makes for success in learning to read: A meta-analysis on intergenerational transmission of literacy. Review of Educational Research. 1995;**65**(1):1-21. DOI: 10.3102/00346543065001001

[16] Mol SE, Bus AG, De Jong MT, Smeets DJH. Added value of dialogic parent–child book readings: A meta-analysis. Early Education and Development. 2008;**19**:7-26. DOI: 10.1080/10409280701838603

[17] McElvany N, Herppich S, Van Steensel R, Kurvers J. Zur Wirksamkeit familiärer Frühförderungsprogramme im Bereich Literacy-Ergebnisse einer Meta-Analyse [On the Effectiveness of Family Programs of Preschool Education in the Field of Literacy – Results of a meta-analysis]. Zeitschrift für Pädagogik. 2010;**56**(2):178-192

[18] Marulis L, Neuman S. The effects of vocabulary intervention on young children's word learning: A meta-analysis. Review of Educational Research. 2010;**80**(3):300-333. DOI: 10.3102/0034654310377087

[19] Anderson J, Anderson A, Sadiq A. Family literacy programmes and young children's language and literacy development: Paying attention to families' home language. Early Child Development and Care. 2017;**187**(3-4):644-654. DOI: 10.1080/03004430.2016.1211119

[20] Souvignier E, Dignath van Ewijk C. Pädagogische Interventionsforschung—ein historischer Rückblick. In: Hascher T, Schmitz B, editors. Pädagogische Interventionsforschung. Theoretische Grundlagen und empirisches Handlungswissen [Pedagogical intervention research – theoretical principles and empirical knowledge]. Weinheim: Juventa; 2010. pp. 12-30

[21] Villiger C, Niggli A, Wandeler C, Kutzelmann S. Does family make a difference? Mid-term effects of a school/home-based intervention program to enhance Reading motivation. Learning and Instruction. 2012;**22**(2):79-91. DOI: 10.1016/j.learninstruc.2011.07.001

[22] Pagan S, Sénéchal M. Involving parents in a summer book reading program to promote reading comprehension, fluency, and vocabulary in grade 3 and grade 5 children. Canadian Journal of Education. 2014;**37**(2):1-31

[23] Wieschollek S. Lesen in Familien Mit Family Literacy [Reading in Families with Family Literacy]. Wiesbaden: Springer; 2018

[24] Baker L, Mackler K, Sonnenschein S, Serpell R. Parents' interactions with their first-grade children during storybook reading and relations with subsequent home reading activity and reading achievement. Journal of School Psychology. 2001;**39**(5):415-438. DOI: 10.1016/s0022-4405(01)00082-6

[25] Bergin C. The parent-child relationship during beginning reading. Journal of Literacy Research. 2001;**33**(4):681-706. DOI: 10.1080/10862960109548129

[26] Sonnenschein S, Munsterman K. The influence of home-based reading interactions on 5-year-olds' reading motivations and early literacy development. Early Child Research Quarterly. 2002;**17**:318-337. DOI: 10.1016/s0885-2006(02)00167-9

[27] Terlitsky AB, Wilkins J. Characteristics of family literacy programmes that improve child literacy, behaviour and parenting skills. International Journal of Pedagogies and Learning. 2015;**10**(2):121-138. DOI: 10.1080/22040552.2015.1113846

[28] Topping KJ. Paired Reading Training Pack. Huddersfield: Kirklees Paired Learning Project; 1988

[29] National Reading Panel. Teaching Children to Read: An Evidence-Based Assessment of the Scientific Research Literature on Reading and its Implications for Reading Instruction. Washington, DC: National Institute of Child Health and Human Development Clearinghouse; 2000

[30] Perfetti CA. Reading ability. New York: Oxford University Press; 1985

[31] Deci EL, Ryan RM. Handbook of Self-Determination Research. Rochester, NY: University of Rochester; 2002

[32] McNaughton S, Glynn T, Robinson VM. Pause, Prompt and Praise: Effective Remedial Reading Tutoring. Birmingham, UK: Positive Products; 1987

[33] Elbaum B, Vaughn S, Hughes MT, Moody SW. How effective are one-to-one tutoring programs in reading for elementary students at risk for reading failure? A meta-analysis of the intervention research. Journal of Education & Psychology. 2000;**92**:605-619. DOI: 10.1037/0022-0663.92.4.605

[34] Ritter GW, Barnett JH, Denny GS, Albin GR. The effectiveness of volunteer tutoring programs for elementary and middle school students: A meta-analysis. Review of Educational Research. 2009;**79**(1):3-38. DOI: 10.3102/0034654308325690

[35] Topping KJ, Lindsay GA. Paired reading: A review of the literature. Research Papers in Education. 1992;**7**(3):199-246. DOI: 10.1080/0267152920070302

[36] Topping K. Paired reading and related methods for improving fluency. International Electronic Journal of Elementary Education. 2014;**7**(1):57-70

[37] Overett J, Donald D. Paired reading: Effects of a parent involvement programme in a disadvantaged community in South Africa. The British Journal of Educational Psychology. 1998;**68**:347-356. DOI: 10.1111/j.2044-8279.1998.tb01296.x

[38] Lam S-F, Chow-Yeung K, Wong BPH, Lau KK, Tse SI. Involving parents in paired reading with preschoolers: Results from a randomized controlled trial. Contemporary Educational Psychology. 2013;**38**(2):126-135. DOI: 10.1016/j.cedpsych.2012.12.003

[39] Cadieux A, Boudreault P. The effects of a parent-child paired reading program on reading abilities, phonological awareness and self-concept of at-risk pupils. Reading Improvement. 2005;**42**(4):224-237

[40] Miller BV, Kratochwill TR. An evaluation of the paired reading program using competency-based training. School Psychology International. 1996;**17**:269-291. DOI: 10.1177/0143034396173003

[41] de la Rie S, van Steensel RCM, van Gelderen AJS. Implementation quality of family literacy programmes: A review of literature. The Review of Education. 2017;**5**(1):91-118. DOI: 10.1002/rev3.3081

[42] Naepflin C, Frommelt M, Hugener I, Trettenborn A, Villiger C, Hauri S, et al. Implementationsqualität unter der Lupe: Unterscheiden sich Eltern und Lesecoachs in der Umsetzung eines Trainings zur Förderung der Leseflüssigkeit? [Scrutinizing implementation quality: Do parent tutors and volunteer tutors differ in the implementation of a reading fluency training?]. Psychologie in Erziehung und Unterricht. 2020;**67**(2):95-111. DOI: 10.2378/peu2019.art17d

[43] Manz PH, Hugues C, Barnabas E, Bracaliello C, Ginsburg-Block M. A descriptive review and meta-analysis of family-based emergent literacy interventions: To what extent is the

research applicable to low-income, ethnic-minority or lingustically-diverse young children? Early Child Research Quarterly. 2010;**25**:409-431. DOI: 10.1016/j.ecresq.2010.03.002

[44] Powell DR, Carey A. Approaches to program fidelity in family literacy research. In: Wasik BH, editor. Handbook of Family Literacy. 2nd ed. New York: Routledge; 2012. pp. 387-400

[45] Pfost M, Hattie J, Dörfler T, Artelt C. Individual differences in reading development: A review of 25 years of empirical research on Matthew effects in reading. Review of Educational Research. 2014;**84**(2):203-244. DOI: 10.3102/0034654313509492

[46] Stanovich KE. Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. Reading Research Quarterly. 1986;**21**:360-407. DOI: 10.1598/rrq.21.4.1

[47] Artelt P, Baumert J, Julius-McElvany N, Peschar J. Learners for Life: Student Approaches to Learning. Results from PISA 2000. Paris: OECD; 2003

[48] Guthrie JT, Wigfield A, Perencevich KC, editors. Motivating Reading Comprehension. Concept-Oriented Reading Instruction. Mahwah, NJ: Lawrence Erlbaum Associates; 2004

[49] Pfost M, Dörfler T, Artelt C. Reading competence development of poor readers in a German elementary school sample: An empirical examination of the Matthew effect model. Journal or Research in Reading. 2012;**35**(4):411-426. DOI: 10.1111/j.1467-9817.2010.01478.x

[50] Wigfield A, Eccles JS. The development of achievement task values: A theoretical analysis. Developmental Review. 1992;**12**(3):265-310. DOI: 10.1016/0273-2297(92)90011-p

[51] Brisson BM, Dicke A-L, Gaspard H, Häfner I, Flunger B, Nagengast B, et al. Short intervention, sustained effects: Promoting students' competence beliefs, effort, and achievement in mathematics. American Educational Research Journal. 2017;**54**(6):1048-1078. DOI: 10.3102/0002831217716084

[52] Corno L, Kanfer R. The role of volition in learning and performance. In: Darling-Hammond L, editor. Review of Research in Education. Vol. 19. Itasca: F.E. Peacock; 1993. pp. 301-341. DOI: 10.2307/1167345

[53] Garcia T, McCann EJ, Turner JE, Roska L. Modeling the mediating role of volition in the learning process. Contemporary Educational Psychology. 1998;**23**(4):392-418. DOI: 10.1006/ceps.1998.0982

[54] Van Steensel R, Herppic S, McElvany N, Kurvers J. How effective are family literacy programs for children's literacy skills? A review of the meta-analytic evidence. In: Wasik BH, editor. Handbook of Family Literacy. 2nd ed. New York: Routledge; 2012. pp. 135-148

[55] McElvany N, Becker M, Lüdtke O. Die Bedeutung familiärer Merkmale für Lesekompetenz, Wortschatz, Lesemotivation und Leseverhalten [the role of family variables in reading literacy, vocabulary, reading motivation, and reading behavior]. Zeitschrift für Entwicklungspsychologie und Pädagogische Psychologie. 2009;**41**(3):121-131. DOI: 10.1026/0049-8637.41.3.121

[56] Davis-Kean PE. The influence of parent education and family income on child achievement: The indirect role of parental expectations and the home environment. Journal of Family Psychology. 2005;**19**(2):294-304. DOI: 10.1037/0893-3200.19.2.294

[57] Jeynes WH. The salience of the subtle aspects of parental involvement and encouraging that involvement: Implications for school-based programs. Teachers College Record. 2010;**112**(3):747-774

[58] Wilder S. Effects of parental involvement on academic achievement: A meta-synthesis. Education Review. 2014;**66**(3):377-397. DOI: 10.1080/00131911.2013.780009

[59] Wanzek J, Vaughn S. Response to varying amounts of time in reading intervention for students with low response to intervention. Journal of Learning Disabilities. 2008;**41**(2):126-142. DOI: 10.1177/0022219407313426

[60] Topping KJ, Thurston A, McGavock K, Conlin N. Outcomes and process in reading tutoring. Educational Research. 2012;**54**(3):239-258. DOI: 10.1080/00131881.2012.710086

[61] Cohen PA, Kulik JA, Kulik C-LC. Educational outcomes of tutoring: A meta-analysis of findings. American Educational Research Journal. 1982;**19**(2):237-248. DOI: 10.3102/00028312019002237

[62] Walter J. LDL Lernfortschrittsdiagnostik Lesen. Ein Curriculumbasiertes Verfahren. [Diagnosis of Learning Progress in Reading. A Curriculum-Based Method]. Gottingen: Hogrefe; 2009

[63] Petermann F. SET 5-10. Sprachstandserhebungstest für Kinder im Alter zwischen 5 und 10 Jahren [Test to assess the literacy skills of children aged 5 to 10 years]. Gottingen: Hogrefe; 2012

[64] Weiss RH, Osterland J. CFT-1R. Grundintelligenztest Skala 1 (Revision) [CFT-1R. Cognitive abilities scale 1 (Revision)]. Göttingen: Hogrefe; 2013

[65] Stutz F, Schaffner E, Schiefele U. Measurement invariance and validity of a brief questionnaire on reading motivation in elementary students. Journal of Research in Reading. 2017;**40**(4):439-461. DOI: 10.1111/1467-9817.12085

[66] Ganzeboom HBG, Treiman DJ. Internationally comparable measures of occupational status for the 1988 international standard classification of occupations. Social Science Research. 1996;**25**:201-239. DOI: 10.1006/ssre.1996.0010

[67] Moser U, Tresch S. Best Practice in der Schule. Von erfolgreichen Lehrerinnen und Lehrern lernen [Best practice in school. Learning from successful teachers]. Buchs, Switzerland: Aargauer Lehrmittelverlag des Kantons AG; 2003

[68] Helmke A, Schrader F-W, Hosenfeld I. Elterliche Lernunterstützung und Schulleistungen ihrer Kinder. Bildung und Erziehung. 2004;**57**(3):251-277. DOI: 10.7788/bue.2004.57.3.251

[69] Cronbach LJ, Gleser GC, Nanda H, Rajaratnam N. The Dependability of Behavioral Measurements. New York: Wiley; 1972

[70] Rowe ML, Ramani GB, Pomerantz EM. Parental involvement and children's motivation and achievement: A domain-specific perspective. In: Wentzel KR, Miele DB, editors. Handbook of Motivation at School. New York: Routledge; 2016. pp. 459-476

[71] Shadish WR, Cook TD, Campbell DT. Experimental and Quasi-Experimental Designs for Generalized Causal Inference. Belmont: Wadsworth Cengage Learning; 2010

[72] Matthews JM, Hudson AM. Guidelines for evaluating parent training programs. Family

Relations. 2001;**50**(1):77-86. DOI: 10.1111/j.1741-3729.2001.00077.x

[73] de Jong PF, Leseman PPM. Lasting effects of home literacy on reading achievement in school. Journal of School Psychology. 2001;**39**(5):389-414. DOI: 10.1016/s0022-4405(01)00080-2

[74] Niklas F, Möllers K, Schneider W. Die frühe familiäre Lernumwelt als mediator zwischen strukturellen Herkunftsmerkmalen und der basalen Lesefähigkeit am Ende der ersten Klasse. [the early learning environment provided by the family as a mediator between structural family background and basic reading abilities at the end of grade 1]. Psychologie in Erziehung und Unterricht. 2013;**60**:94-111. DOI: 10.2378/peu2013.art08d

[75] Sénéchal M, LeFevre J-A. Parent involvement in the development of children's reading skill: A five-year longitudinal study. Child Development. 2002;**73**(2):445-460. DOI: 10.1111/1467-8624.00417