SPECIJALNA EDUKACIJA I REHABILITACIJA
2026, Vol. 25, Br. 2, str. 137-154

UDK: 159.946.4.072-056.3-053.5(497.4)
159.955.072-056.3-053.5(497.4)
Originalan naučni rad
DOI: https://doi.org/10.5937/specedreh25-62681

Teacher's identification of students with reading difficulties in the upper grades of elementary school

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Introduction. Teachers play a key role in detecting students with reading difficulties, yet identifying older elementary students who mainly read silently remains challenging. Traditional fluency assessments focus on oral reading and do not fully capture reading efficiency—the integration of fluent, automatic decoding and real-time comprehension. This study develops and provides initial validity evidence for the Speed Reading Test (SRT), a silent-reading measure of reading efficiency, and examines its links to comprehension and academic outcomes. *Aim*. To provide initial validity evidence for the SRT as a silent-reading measure of reading efficiency and examine its associations with teacher-rated reading ability, language background, prior additional professional support (APS), and grades in key subjects. *Methods*. The sample comprised 1.315 students (653 fifth- and 662 eighth-graders) from 17 Slovenian primary schools. Data included gender, first language, APS history, teacher-rated reading, and final grades. The 25-item timed SRT was administered alongside reading comprehension, vocabulary, and syntax tests. Independent-samples *t*-tests and Pearson correlations examined subgroup differences and associations with achievement. SRT cut-offs were determined by comparison with comprehension scores. *Results*. Girls outperformed boys, with the gap widening by Grade 8. Students from non-Slovene-speaking homes and those with APS scored significantly lower on the SRT. The SRT correlated strongly with teacher-rated reading ($r \approx .63$) and moderately with school grades ($r = .45–.57$, $p < .01$). A 20th-percentile cut-off helped identify students at potential risk of poor comprehension. *Conclusions*. The SRT is a practical classroom tool for identifying upper-grade students whose silent-reading difficulties hinder achievement. Combined with teacher observations, it supports timely, data-informed instruction and progress monitoring.

Keywords: reading fluency, reading efficiency, reading difficulties

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This paper was supported by the national project OBJEM (Ozaveščanje, Branje, Jezik, Evalvacija, Modeli – Awareness, Reading, Language, Evaluation, Models; project no. OP20.01462), coordinated by the Slovenian National Education Institute and co-financed by the European Social Fund and the Ministry of Education of the Republic of Slovenia.

Introduction

Literacy development represents a cornerstone of educational progress, as underscored by numerous scholars. Foundational skills vital for literacy acquisition begin to emerge well before formal schooling and are systematically refined during the early school years through targeted instruction in reading and writing. This foundational phase supports the continuing evolution of reading competence throughout the educational trajectory (Cameron et al., 2023; Petscher et al., 2020).

Educators employ varied instructional strategies to foster reading development, tailoring these approaches to align with students' individual characteristics and needs. A widely accepted framework for structuring effective reading instruction is the concept of reading literacy components (National Reading Panel, 2000), which delineates the core domains that educators are expected to address systematically across subject areas. The multidimensional nature of reading proficiency necessitates teaching strategies that recognize the interplay between its components, as well as their developmental relevance at different educational stages.

This article specifically addresses two interrelated components, reading fluency and reading comprehension, which are deeply interconnected and thus best examined in tandem. To explore their relationship, we introduce the Speed Reading Test (SRT), developed for this study and adapted for fifth- and eighth-grade students. The SRT forms part of a broader assessment toolkit devised within the OBJEM research project[1], aimed at supporting educators in tracking students' reading development and identifying learners at risk of underperforming. Such instruments are particularly valuable for detecting students whose reading comprehension may be compromised by limitations in fluency, thereby impacting their broader academic performance. Given that the SRT emphasizes a slightly different dimension of reading fluency, we adopt the term *reading efficiency*, a distinction elaborated in the following sections.

By analysing performance on the SRT among diverse readers in grades five and eight, this study presents insights into how specific variables influence reading outcomes. In particular, the findings highlight key differences between proficient and struggling readers, informing both responsive instructional planning for older primary students and early intervention strategies to pre-empt future difficulties.

1 Reading Literacy and Slovene Language Development – OBJEM was a national development project conducted from 2017 to 2022 and led by the National Education Institute Slovenia. The project aimed to improve reading literacy across the educational continuum, from preschool to upper secondary education, through the development and piloting of didactic approaches, literacy building blocks, diagnostic tools, and models of support for reading development. More information about the project is available on the official project website: https://www.zrss.si/projekti/projekt-objem/

Despite the well-documented importance of fluency in early reading acquisition, far less is known about how reading fluency and comprehension interact in *upper-elementary* students who primarily engage in silent reading. Existing assessment tools, typically based on oral reading or self-reported silent reading, often fail to capture the integrated construct of *reading efficiency*, understood as fluent, automatic decoding combined with real-time comprehension. In addition, limited attention has been paid to how learner characteristics, such as gender, first language, and prior Additional Professional Support (APS), shape reading efficiency and subsequent academic achievement in later grades.

To address these gaps, the present study develops and provides initial validity evidence for the SRT as a silent-reading measure of reading efficiency and examines its relation to comprehension and academic outcomes in fifth- and eighth-grade students.

From Reading Fluency to Reading Efficiency

Assessment of reading ability begins with identifying the reader's developmental stage. Theories of reading development, such as those outlined by Chall (1996), describe qualitative and quantitative transitions, from emergent literacy, where foundational knowledge and skills form, to advanced reading stages involving reflective interpretation and meaning-making. Early reading behaviours, such as visual word recognition at the logographic stage (Frith, 1986, as cited in Egert, 1998), evolve into more sophisticated processes that integrate decoding, lexical access, and semantic understanding—critical for reading comprehension (Perfetti, 1985; Perfetti, 2007).

Seminal models, notably the LaBerge and Samuels theory of automatization (1974, as cited in Egert, 1998), emphasize the transition from effortful decoding to automatic word recognition as essential for fluent and meaningful reading. In their model, fluent readers allocate minimal cognitive resources to decoding, enabling focused engagement with semantic content. While the authors reference reading fluency, they stop short of formally defining it (LaBerge & Samuels, 1974, as cited in Biancarosa & Shanley, 2016), instead conceptualizing fluency as automatic decoding that supports comprehension.

Most definitions of fluency emphasize behavioural characteristics: accuracy, rate, and prosody (Rasinski, 2004; Rasinski et al., 2010). However, the role of prosody remains contested, and early models (e.g., LaBerge & Samuels, 1974; Perfetti, 1985) did not fully account for expressive or syntactic aspects of fluent reading. Subsequent perspectives, including those by Biancarosa and Shanley (2016), suggest syntactic processing is integral and concurrent with semantic interpretation. Despite this, standard fluency measures often prioritize speed and accuracy, as these are more readily quantifiable than expressive elements.

Critiques of this narrow view have led to a broader, cognitively informed understanding of fluency, which integrates comprehension as a central component (Alt & Samuels, 2010). Pikulski and Chard (2005) emphasize this dual focus by proposing a definition that bridges oral fluency and silent reading comprehension. Others, such as Guthrie (2015), frame *effective reading* as fluent, effort-free reading that inherently results in comprehension. Samuels (2007, as cited in Alt & Samuels, 2010) warns against misinterpreting fluency as merely surface-level performance, divorced from understanding. Effective readers, by contrast, conserve cognitive energy on decoding, allowing fuller engagement with the text's meaning, underscoring the need to incorporate comprehension into any valid assessment of fluency (Kim & Wagner, 2015; Snow, 2002).

Measuring Fluency and Efficiency in Upper Elementary Grades

Though traditionally linked with early reading instruction, fluency remains critical in later grades, where students confront more complex texts. A growing body of research (e.g., Rasinski et al., 2010) indicates that insufficient fluency continues to hinder comprehension among older learners. Standard approaches such as repeated reading, effective in younger students, yield diminishing returns with age (Wexler et al., 2010), necessitating adapted strategies, including direct instruction in comprehension and vocabulary, scaffolded reading, and real-time feedback.

This shift also raises questions about assessment. Oral reading, commonly used with younger learners, enables precise measurement of word-level accuracy and speed but is less practical and contextually appropriate for older students who primarily read silently. Group-administered silent reading tests offer greater efficiency but present challenges in reliably capturing reading behaviour and comprehension. For example, Fuchs et al. (2001) found that self-reported silent reading measures correlated less with comprehension than oral assessments, possibly due to reporting inaccuracies. Similarly, nonstandard assessments, such as word segmentation tasks, also showed weaker alignment with comprehension outcomes (Hammill et al., 2006).

Denton et al. (2011) further observed significant correlations between fluency and comprehension among sixth- to eighth-grade students, albeit weaker than those found in the early grades. These findings suggest that simple fluency tests can serve as preliminary screeners to identify lingering decoding inefficiencies. Establishing reading speed benchmarks, such as those proposed by Martins and Capellini (2021), can help differentiate students who need intensified fluency instruction from those who require broader comprehension support. However, such thresholds must be interpreted cautiously, particularly in the absence of triangulating comprehension data.

Given these complexities, the term *reading efficiency* better captures the integration of decoding fluency with concurrent comprehension. Traditional

oral fluency assessments may not fully reflect older students' reading processes, which increasingly rely on silent and strategic reading. Therefore, instruments capable of evaluating both speed and understanding simultaneously are essential criteria that informed the design of our assessment tools.

In the present study, reading efficiency is conceptualized not as a separate higher-order construct, but as a functional extension of reading fluency in the context of silent reading. Whereas traditional fluency measures are most often operationalized through oral reading accuracy, rate, and prosody, reading efficiency refers to students' ability to process written text silently, rapidly, and accurately while maintaining sufficient real-time comprehension. Psychometrically, the SRT does not aim to replace established fluency measures, but to capture a classroom-relevant aspect of reading performance in upper elementary grades, where reading is predominantly silent and comprehension must be monitored during ongoing text processing. This theoretical framing, informed by both the Simple View and the Active View of Reading, supports our inclusion of process variables such as fluency and cognitive flexibility in the analysis of SRT data.

From Simple to Active Models of Reading

Reading comprehension arises from more than accurate, fluent decoding. It is grounded in linguistic and conceptual knowledge, including vocabulary and syntax, as well as broader cognitive and self-regulatory processes. The Simple View of Reading (Hoover & Gough, 1990), operationalized by Wren (2001), frames comprehension as the product of decoding and language comprehension. Despite its longstanding influence, this model does not account for process-based difficulties or self-regulation, which research increasingly implicates in comprehension challenges (Perfetti et al., 1996, as cited in Lipec Stopar, 2005).

Duke and Cartwright (2021) propose the Active View of Reading, incorporating motivational and executive functioning variables, as well as flexible cognitive processing. Their expanded model acknowledges that many struggling comprehenders exhibit intact decoding and fluency, pointing to more nuanced deficits. Elements such as reading fluency, working memory, and cognitive flexibility are reframed as process variables linking decoding to comprehension.

This paper explores reading heterogeneity in fifth- to eighth-grade students, analysing performance in our reading efficiency test relative to variables such as first language, gender, and prior APS (additional professional support). By comparing subgroup outcomes and highlighting students who fall below fluency thresholds, we underscore the need for ongoing monitoring and targeted intervention in the upper elementary years. With academic texts becoming progressively demanding, reading efficiency, automated decoding paired with real-time comprehension, emerges as essential. Deficiencies in this

domain can undermine achievement across subjects that rely on text-based learning (Fuchset et al., 2001; Snow, 2002).

Despite a growing body of evidence on the role of fluency in early reading acquisition, less is known about how reading fluency and comprehension interact in upper-elementary students who predominantly read silently. Current measures, often based on oral reading or self-reported silent reading, do not adequately capture the integrated construct of reading efficiency. Recent meta-analytic evidence, however, raises caution about the strength of some silent reading fluency measures. For instance, Wissinger et al. (2024) evaluated the Test of Silent Contextual Reading Fluency (TOSCRF) and Test of Silent Word Reading Fluency (TOSWRF) across multiple studies and found only trivial average correlations with standardized reading tests, suggesting limited incremental validity in some contexts. Moreover, limited attention has been given to how variables such as gender, first language, and prior additional professional support shape reading efficiency in later grades. This study addresses these gaps by developing the Speed Reading Test (SRT) and providing initial validity evidence for its use as a measure of silent reading efficiency, examining its relation to comprehension and academic achievement in fifth- and eighth-grade students. The research is guided by three specific questions:

1. How effectively does the SRT distinguish between proficient and struggling readers?
2. How do demographic and instructional factors (gender, first language, prior APS) influence SRT performance and reading efficiency?
3. How strongly are SRT scores associated with broader academic outcomes, including teacher's reading assessment and subject grades?

Method

The study was conducted in accordance with the Declaration of Helsinki (2013 revision). Formal ethics committee approval was not required under national and institutional guidelines because the research involved non-invasive, anonymized educational assessments with parental consent and school authorization.

Participants

The study included 653 fifth-grade and 662 eighth-grade students from 17 Slovenian primary schools, all of whom participated with informed consent. Data are presented separately for each grade level. In addition to gender, data were collected on first language (Slovene vs. other), receipt of Additional Professional Support (APS) in reading in prior school years, teacher-assessed reading ability, and final grades in key curricular subjects from the previous year. These variables serve to contextualize

group differences and offer a basis for interpreting variance in student performance. Summary statistics for both samples are provided in Tables 1 and 2.

Table 1

Demographic data for fifth - and eighth-grade participants: gender, first language, and receipt of additional professional support (APS)

Variable	Category	5th grade n	%	8th grade n	%
Gender	Girls	307	47.0	341	51.5
	Boys	346	53.0	321	48.5
First language	Slovene	599	91.7	616	93.1
	Other	54	8.3	46	6.9
APS	Yes	31	4.7	47	7.1
	No	621	95.1	615	92.9

As shown in Table 1, the two grade-level samples were broadly comparable in terms of gender distribution. Students whose first language was not Slovene represented a relatively small subgroup in both grades. The proportion of students who had received APS in reading was also low, but slightly higher among eighth-graders.

Table 2

Final grades in the previous year by subject and teacher's reading assessments for fifth - and eighth-grade students

Grade	Variable	Lowest (1) *n* (%)	(2) *n* (%)	(3) *n* (%)	(4) *n* (%)	Highest (5) *n* (%)
5th	Teacher's reading assessment	21 (3.2)	82 (12.6)	147 (22.5)	224 (34.3)	179 (27.4)
	Slovenian	6 (0.9)	36 (5.5)	97 (14.9)	252 (38.6)	258 (39.5)
	Math	7 (1.1)	55 (8.4)	129 (19.8)	219 (33.5)	238 (36.4)
	Social studies	6 (0.9)	23 (3.5)	129 (19.8)	196 (30.0)	293 (44.9)
8th	Teacher's reading assessment	7 (1.1)	61 (9.2)	172 (26.0)	211 (31.9)	211 (31.9)
	Slovenian	2 (0.3)	111 (16.8)	172 (26.0)	184 (27.8)	187 (28.2)
	Math	5 (0.8)	169 (25.5)	154 (23.3)	177 (26.7)	152 (23.0)
	Social studies	3 (0.5)	118 (17.8)	150 (22.7)	187 (28.2)	197 (29.8)

Table 2 indicates that teacher-rated reading ability and subject grades were distributed across the full five-point scale in both grades. Most students received higher teacher ratings and school grades, while a smaller proportion were placed in the lower categories. This variation in teacher-rated reading ability and academic achievement provided a basis for examining their associations with SRT performance.

Variables and Measurements

Reading Efficiency

Reading efficiency was assessed using the SRT, developed specifically for this study. Tailored versions for fifth and eighth grades each consisted of 25 short paragraphs containing semantically incongruent or misused words. Students were required to identify and cross out these errors as quickly as possible within a five-minute time limit. The task assessed silent reading and comprehension under time pressure. Comprehension was embedded in the task format rather than scored as a separate component. Each item required students to read a short paragraph and detect a semantically incongruent or misused word. A correct response therefore depended not only on rapid word recognition but also on monitoring meaning during silent reading. The final SRT score represented the number of correctly identified incongruities within the five-minute time limit. Speed and accuracy were not analyzed as separate indicators in the present study, because the test was designed as an integrated classroom measure of silent reading efficiency under time constraints. Table 3 provides sample items for both versions.

Table 3

Example items from the SRT for fifth- and eighth-grade students

Example of a task for 5th grade	Example of a task for 8th grade
One day Marko, the neighbour, kicked the ball too hard and it flew into the street. As he ran after it, he was hit by a car. He broke both his legs, and we were all afraid that he would never see again. His mother had to drive him around in a wheelchair for a long time.	As children, we often played football with our friends. One day Marko, the neighbour, kicked the ball too hard and it flew into the street. As he ran after it, he was hit by a car and broke both his legs. I remember how scared we all were that he would never see again. After the accident, his mother had to drive him around in a wheelchair for a long time.

The SRT was developed based on theoretical frameworks of reading and underwent two pilot phases. Items were selected with difficulty indices between 0.5 and 0.8 and discrimination indices above 0.2. The text passages were kept concise, and the position of target words was varied to avoid predictability.

The internal consistency of the SRT, a 25-item timed test, was assessed using Cronbach's alpha. Because the test was administered under strict time limits, many participants did not complete all items. Unanswered items were coded as 0 (incorrect); this may have slightly underestimated internal consistency, as later items show lower variance and weaker inter-item correlations. Cronbach's alpha was .82, indicating good internal consistency.

Additional tests included assessments of reading comprehension, vocabulary, and syntactic skills, each targeting core components of reading proficiency and serving as references for interpreting SRT results.

Evidence related to construct validity was examined through subgroup differences and associations with theoretically related reading and language measures. It was expected that students with prior APS in reading, students whose first language was not Slovene, and students with lower vocabulary, syntax, and comprehension scores would achieve lower SRT results. Criterion-related validity evidence was examined through correlations between SRT scores, teacher-rated reading ability, and final grades in Slovenian, Mathematics, and Social Studies.

Reading Comprehension

Students read a longer, grade-appropriate text and answered both multiple-choice and open-ended comprehension questions.

Vocabulary

This test consisted of 30 brief passages with one underlined word or phrase. Students chose the best meaning from a list of options.

Syntactic Skills

The syntax test included both multiple-choice items and sentence completion tasks, focusing on various syntactic relationships (e.g., causal, conditional, intentional).

Other Variables

Teachers completed pre-prepared forms indicating students' gender, first language, previous APS, reading ability, and grades.

Procedure

Descriptive statistics were calculated for the overall sample and for subgroups (e.g., by gender, language background, APS). Analyses addressing the three research questions began with subgroup comparisons to test the SRT's ability to discriminate between proficient and struggling readers: differences in SRT performance were examined using independent-samples t-tests. In addition to statistical significance, Cohen's d was calculated for all independent-samples t-tests to estimate the practical magnitude of group differences. Values of approximately .20, .50, and .80 were interpreted as small, medium, and large effects, respectively. Pearson correlation coefficients were computed to assess associations between SRT scores, teacher's reading assessments, and subject grades.

Finally, SRT thresholds indicative of adequate comprehension were determined by comparing SRT results with reading comprehension scores. The 20th percentile was selected as a pragmatic screening threshold for identifying students whose SRT

performance suggested a potential risk for inadequate reading comprehension. This cut-off was not intended as a diagnostic criterion for reading disabilities, but as a classroom-based indicator of students who may benefit from further assessment, closer monitoring, or targeted instructional support.

Results

SRT Performance by Gender, First Language, and APS Status

Subgroup analyses revealed statistically significant differences in SRT performance across all independent variables (Table 4).

Table 4

SRT scores by gender, first language, and receipt of APS in fifth and eighth grade, and statistical significance of group differences

Grade	Variable	Category	*n*	*M*	*SD*	*t (p)*	*Cohen's d*
5th	Gender	Girls	307	9.18	5.44	−2.54, p < .01	.20
		Boys	346	8.12	5.21		
	First language	Slovene	599	8.96	5.23	5.59, p < .01	.80
		Other	54	4.81	5.08		
	APS	No	621	8.91	5.29	6.22, p < .01	1.14
		Yes	31	2.97	2.32		
8th	Gender	Girls	341	16.21	6.43	−5.73, p < .01	.45
		Boys	321	13.33	6.49		
	First language	Slovene	616	15.13	6.46	4.54, p < .01	.69
		Other	46	10.61	7.33		
	APS	No	615	15.47	6.29	9.77, p < .01	1.48
		Yes	47	6.32	4.66		

Girls outperformed boys at both grade levels, with the performance gap widening by eighth grade. Students from non-Slovene-speaking households scored significantly lower, and those receiving APS performed markedly worse than their peers. The latter suggests the SRT is sensitive to previously identified reading-related difficulties. The performance gap for students from different linguistic backgrounds and APS recipients increased with age, suggesting cumulative challenges in reading development. Effect sizes indicated that gender differences were small in Grade 5 and small-to-moderate in Grade 8, whereas differences related to first language and APS status were moderate to large. The largest effects were observed for APS status, indicating that students with prior APS showed substantially lower SRT performance than their peers.

Associations Between SRT Scores, Teacher Ratings, and School Grades

The associations between SRT scores, teacher-rated reading ability, and school grades were examined to evaluate the educational relevance of silent reading efficiency.

Table 5

Correlation of SRT scores with teacher's reading assessment scores and final grades in specific school subjects

Variable	Statistic	SRT 5th grade	SRT 8th grade
Teacher's reading assessment	Pearson correlation coefficient	.64	.62
	p	< .01	< .01
Slovenian	Pearson correlation coefficient	.57	.50
	p	< .01	< .01
Math	Pearson correlation coefficient	.53	.45
	p	< .01	< .01
Social studies	Pearson correlation coefficient	.48	.48
	p	< .01	< .01

Table 5 presents the correlations between SRT scores and other variables. The strongest correlation was with teacher-assigned reading assessments ($r = .64$ and .62 for fifth and eighth grades, respectively). Correlations with grades in Slovenian, Mathematics, and Social Studies ranged from .45 to .57, all statistically significant ($p < .01$). These results indicate that students with higher reading efficiency tended to receive higher teacher ratings and higher school grades.

Threshold scores on the SRT were used to identify students at risk of inadequate comprehension. Students scoring below the 20th percentile were therefore treated as a lower-performing group for screening purposes. Their performance was compared with that of students scoring above this threshold in order to examine whether the SRT cut-off meaningfully differentiated students across teacher ratings, school grades, vocabulary, syntax, and reading comprehension.

Identification of Students Below the 20th Percentile

To further examine the screening potential of the SRT, students were divided into two groups according to the 20th-percentile threshold. Students scoring below this threshold were considered at potential risk for inadequate silent reading efficiency and were compared with their peers who scored above the threshold. Tables 5–7 present the distribution of students below and above this threshold according to gender, first language, and APS status.

Table 6

Ratio of successful and unsuccessful students in SRT by gender

Grade	Gender	Statistic	Score below 20% *n* (%)	Score above 20% *n* (%)
5th	Boys	*n*	117	229
		%	33.8	66.2
	Girls	*n*	72	235
		%	23.5	76.5
8th	Boys	*n*	37	284
		%	11.5	88.5
	Girls	*n*	20	321
		%	5.9	94.1

Table 6 shows that boys were more frequently represented below the 20th-percentile SRT threshold than girls in both grades. Although the overall proportion of students below the threshold was lower in Grade 8 than in Grade 5, the gender pattern remained consistent, with boys more often represented in the lower-performing group.

Table 7

Ratio of successful and unsuccessful students in SRT by first language

Grade	First language	Statistic	Score below 20% *n* (%)	Score above 20% *n* (%)	Total *n* (%)
5th	Slovene	*n*	156	443	599
		%	26.0	74.0	100.0
	Other	*n*	33	21	54
		%	61.1	38.9	100.0
8th	Slovene	*n*	43	573	616
		%	7.0	93.0	100.0
	Other	*n*	14	32	46
		%	30.4	69.6	100.0

Table 7 indicates that students whose first language was not Slovene were more likely to score below the 20th-percentile SRT threshold than students with Slovene as their first language. This pattern was particularly evident in Grade 5, where more than half of the students with another first language scored below the threshold. The findings suggest that first language background is an important factor to consider when interpreting SRT performance.

Table 8

Ratio of successful and unsuccessful students in SRT according to the presence of APS

Grade	APS status	Statistic	Score below 20% *n* (%)	Score above 20% *n* (%)	Total *n* (%)
5th	No APS	*n*	161	460	621
		%	25.9	74.1	100.0
	APS	*n*	27	4	31
		%	87.1	12.9	100.0
8th	No APS	*n*	33	582	615
		%	5.4	94.6	100.0
	APS	*n*	24	23	47
		%	51.1	48.9	100.0

Table 8 shows the clearest difference for APS status. Students with prior APS in reading were substantially more likely to score below the 20th-percentile SRT threshold than students without APS in both grades. This pattern suggests that the threshold is sensitive to previously identified reading-related difficulties, although it should be interpreted as a screening indicator rather than a diagnostic cut-off.

Characteristics of Students Below the 20th Percentile

Table 9

Some characteristics of the lowest performing students in SRT in 5th grade and their peers

Variable	SRT group	*n*	*M*	*SD*	*t (p)*	*Cohen's d*
Teacher's	Score below 20%	189	2.74	1.01	−17.35, $p < .01$	1.49
reading assessment	Score above 20%	464	4.09	0.86		
Slovenian	Score below 20%	186	3.39	1.02	−14.52, $p < .01$	1.27
	Score above 20%	463	4.40	0.69		
Math	Score below 20%	185	3.32	0.99	−11.38, $p < .01$	1.02
	Score above 20%	463	4.22	0.83		
Social studies	Score below 20%	185	3.61	1.05	−10.31, $p < .01$	.89
	Score above 20%	462	4.37	0.77		
Vocabulary test	Score below 20%	189	9.48	3.73	−11.11, $p < .01$	.94
	Score above 20%	464	13.12	3.96		
Syntax test	Score below 20%	187	17.91	4.19	−14.64, $p < .01$	1.27
	Score above 20%	463	21.64	2.25		
Reading	Score below 20%	187	3.20	1.52	−9.45, $p < .01$	.83
comprehension test	Score above 20%	462	4.60	1.76		

Table 9 shows that fifth-grade students who scored below the 20th-percentile SRT threshold achieved significantly lower results than their peers across all examined measures. The largest differences were observed in teacher-rated reading ability, final grade in Slovenian, and syntax test performance, while substantial differences were also found in Mathematics, Social Studies, vocabulary, and reading comprehension. Effect sizes were large across all comparisons, indicating that low SRT performance in Grade 5 was associated with broader difficulties in reading-related skills and academic achievement.

Table 10

Some characteristics of the lowest-performing students in SRT in 8th grade and their peers

Variable	SRT group	*n*	*M*	*SD*	*t (p)*	*Cohen's d*
Teacher's	Score below 20%	57	2.56	0.89	−10.88, $p < .01$	1.51
reading assessment	Score above 20%	605	3.96	0.93		
Slovenian	Score below 20%	54	2.67	0.73	−7.52, $p < .01$	1.07
	Score above 20%	602	3.77	1.05		
Math	Score below 20%	55	2.51	0.84	−6.75, $p < .01$	.95
	Score above 20%	602	3.55	1.11		
Social studies	Score below 20%	53	2.75	0.94	−6.75, $p < .01$	.97
	Score above 20%	602	3.78	1.07		
Vocabulary test	Score below 20%	55	13.40	3.86	−8.84, $p < .01$	1.25
	Score above 20%	590	18.00	3.67		
Syntax test	Score below 20%	57	18.54	4.55	−6.40, $p < .01$	1.48
	Score above 20%	597	22.45	2.39		
Reading	Score below 20%	57	2.65	1.82	−7.57, $p < .01$	1.05
comprehension test	Score above 20%	590	5.07	2.35		

Among eighth-grade students, the differences between those below and above the 20th-percentile SRT threshold were also substantial and statistically significant across all examined measures (Table 10). Students in the lower-performing SRT group received lower teacher ratings and school grades and achieved lower scores on vocabulary, syntax, and reading comprehension tests. The effect sizes were large to very large, with the most pronounced differences in teacher-rated reading ability, syntax, and vocabulary, suggesting that low SRT performance in Grade 8 was strongly associated with broader language, reading, and academic difficulties. Taken together, the findings presented in Tables 8 and 9 support the use of the SRT as a screening and monitoring tool, as students below the 20th-percentile threshold consistently differed from their peers across teacher ratings, subject grades, and language-related measures.

Discussion

The SRT was developed to assess reading efficiency, conceptualized as an extension of fluency that includes cognitive processing (i.e., comprehension), aligning with contemporary definitions (Guthrie, 2015; Spichtig et al., 2016). Recognizing that oral reading assessments are less appropriate for older learners, the SRT focuses on silent reading, the predominant mode for this age group, while still capturing aspects of fluency and comprehension under time constraints.

Findings indicate significant gender disparities consistent with international data (e.g., PISA), as girls generally outperform boys in reading-related tasks. The importance of linguistic competence, particularly vocabulary and syntax, is evident in the performance gaps observed among non-native Slovene speakers. Despite receiving APS, students in this group continue to underperform, highlighting the enduring nature of reading difficulties.

Moderate-to-high correlations between the SRT and teacher assessments suggest that teachers can generally gauge reading ability, though discrepancies do occur, underscoring the value of using additional structured measures. Correlations with academic subject grades further support the role of reading efficiency in broader academic achievement, particularly as students advance and content complexity increases, while reinforcing the SRT's role as a reliable classroom-based indicator of reading efficiency rather than as a formal standardized or diagnostic instrument.

Consistent with Martins and Capellini (2021), our findings reinforce the utility of fluency-based assessments even in upper elementary grades. The SRT proved sensitive in identifying readers who differ meaningfully across a range of performance indicators, validating its application for screening and monitoring.

The study is limited to Slovenian elementary schools and a specific language context, which may affect the generalizability of the findings. Nevertheless, the SRT demonstrated strong correlations with comprehension and academic outcomes. Future research should therefore replicate these findings across different languages and educational systems and employ longitudinal designs to examine the long-term predictive validity of SRT performance.

Conclusion

This study confirmed that the SRT effectively discriminates between proficient and struggling readers, that gender and first language influence reading efficiency, and that students who had received APS, that is, students with pronounced reading difficulties, achieved significantly lower SRT scores. Furthermore, SRT scores were strongly associated with reading comprehension and overall academic performance.

From a practical perspective, the SRT can be used as a brief classroom-based screening tool to complement teacher observations. For example, students who score below the 20th percentile could be selected for closer analysis of reading comprehension, vocabulary, and syntactic skills. Teachers could use SRT results to identify students who read slowly but understand adequately, students who read quickly but fail to monitor meaning, and students whose low performance suggests broader language-related difficulties. In instructional planning, SRT results may support decisions about targeted fluency practice, vocabulary instruction, guided silent reading, comprehension strategy instruction, or referral for more detailed assessment. Because the test is brief and group-administered, it can also be used periodically, allowing educators to monitor student progress and adjust instruction as needed.

Our findings highlight the necessity of developing reading fluency in tandem with comprehension skills well before upper grades. While early identification remains critical, it is equally important to recognize that reading challenges may emerge or intensify later, particularly as academic demands escalate. The SRT should be seen as a complement, not a replacement for ongoing teacher assessment. It enables timely, data-informed interventions, which are essential for ensuring all students achieve reading proficiency required for success across the curriculum.

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Identifikacija učenika sa teškoćama u čitanju u višim razredima osnovne škole

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Uvod: Nastavnici imaju ključnu ulogu u prepoznavanju učenika sa teškoćama u čitanju, ali identifikacija starijih osnovnoškolaca koji uglavnom čitaju tiho ostaje izazov. Tradicionalne procene tečnosti čitanja fokusiraju se na glasno čitanje i ne obuhvataju *efikasnost čitanja* – spoj tečnog, automatskog dekodiranja i razumevanja u realnom vremenu. Ovo istraživanje razvija Test brzog čitanja (SRT) kao meru efikasnosti tihog čitanja i pruža početne dokaze njegove validnosti, ispitijući njegove veze sa razumevanjem pročitanog i školskim postignućem. *Cilj*: Cilj je bio da se pruže početni dokazi validnosti Testa brzog čitanja (SRT) kao mera efikasnosti tihog čitanja i da se ispita njegova povezanost sa nastavničkom procenom čitalačke sposobnosti, jezičkom pozadinom, prethodnom dodatnom stručnom podrškom (DSP) i školskim ocenama. *Metod*: Uzorak je obuhvatio 1.315 učenika petog i osmog razreda iz 17 osnovnih škola u Sloveniji. Podaci su obuhvatili pol, maternji jezik, istoriju DSP, nastavničku procenu čitanja i završne ocene. SRT, vremenski ograničen test sa 25 zadataka, sproveden je zajedno sa testovima razumevanja pročitanog, vokabulara i sintakse. Razlike među podgrupama i povezanost sa školskim postignućem analizirane su pomoću *t*-testa za nezavisne uzorke i Pirsonove korelacije. Granične vrednosti Testa brzog čitanja određene su poređenjem sa rezultatima testa razumevanja pročitanog. *Rezultati*: Devojčice su postigle bolje rezultate od dečaka, a učenici iz neslovenačkih domaćinstava i oni sa DSP imali su značajno niže rezultate. SRT je snažno korelirao sa nastavničkom procenom čitanja ($r \approx .63$) i umereno sa školskim ocenama ($r = .45–.57$, $p < .01$). *Zaključak*: Test brzog čitanja (SRT) predstavlja praktičan i vremenski efikasan alat za identifikaciju učenika viših razreda osnovne škole čije teškoće u tihom čitanju otežavaju školsko postignuće. U kombinaciji sa nastavničkim opažanjima, SRT omogućava pravovremeno, na podacima zasnovano planiranje nastave i praćenje napretka u čitanju.

Ključne reči: tečnost čitanja, efikasnost čitanja, teškoće u čitanju

PRIMLJENO: 09.11.2025.
REVIDIRANO: 07.06.2026.
PRIHVAĆENO: 08.06.2026.