

Hungarian teachers' reading strategy use in mother tongue and foreign language analysed by background variables

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ABSTRACT

The aim of the present study is to identify teachers' reading strategy use in L1 (mother tongue) and L2 (foreign language), and also to examine whether background variables such as gender, qualification, teaching experience, platform of teaching, reading habits, majors, L2 level and the number of L2s known make a difference in teachers' reading strategy use. Reading has been widely researched yet examining L1 and L2 reading strategy use simultaneously yielded contradicting results. Furthermore, there is little research on teachers' reading strategy use although their role in students' reading is vital. An online, anonymous questionnaire including background variables and items from MARSİ was used, which was filled in by 256 teachers. Data analysis found that teachers use more reading strategies in L1 than in L2. No background variable had any significant relationship with L1 reading strategy use. Reading habits, L2 level, majors and L2s known, however, did make a difference in teachers' L2 reading strategy use. Thus it seems that L2 metalinguistic knowledge and reading habits might be important to consider when examining reading strategies.

KEYWORDS

reading strategies, language proficiency, native language, teachers' knowledge, background variables, metalinguistic knowledge

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INTRODUCTION

It is well-known that reading is a vital tool in professional, school and everyday life (Schnotz & Molnár, 2012). However, it has also been shown in the past few years that in several countries, Hungary among them, students produced worrying results in reading (e.g. OECD, 2019). A Hungarian study has found that teachers consider the responsibility of improving reading mostly lying at Hungarian language teachers' door (Tóth, 2015) – even though the requirements of the curriculum and clear suggestions of research highlight the importance of improving reading in every subject (Nemzeti Alapanterv, 2020; Steklács, 2018). Research has also shown that teachers often do not feel they have enough knowledge to successfully improve their students' reading (Reutzel, 2017). At the same time teachers play an essential role in students' learning and reading. Their knowledge can have an important effect on their students (Soodla, Jogi, & Kikas, 2017). Yet examining teachers own mother tongue (L1) and foreign language (L2) reading has been a neglected area in research. For this reason, this study seeks to contribute to the exploration of how teachers see their own reading and whether background variables are connected to, or make a difference in, teachers' reported reading strategy use in L1 and L2.

LITERATURE REVIEW

Reading strategies

Many studies researched and defined the characteristics of reading strategies, which include the following. Reading strategies require deliberate, controlled, effortful and time-consuming processes (Afflerbach, Pearson, & Paris, 2008). They have an important role in problem solving, applied when comprehension gets difficult, especially in the case of technical texts or materials for learning (Greaser, 2007; Okkinga et al., 2018; Palincsar & Brown, 1984). Reading strategies are also the base for conscious, effective reading and interpreting abilities (National Reading Panel, 2000), help the reader to engage with the text (Alderson & Cseresznyés, 2003), construct meaning (Chen & Chen, 2015; Jou, 2015), and allow deep understanding of what is being read (McNamara & Magliano, 2009). In short, they “are deliberate, goal-directed attempts to control and modify the reader's effort to decode text, understand words and construct meanings of text (Afflerbach, Pearson, & Paris, 2017, 38).”

A knowledge of a wide repertoire of reading strategies is inevitable, however, it is also important to be flexible, i.e. to be aware of which strategy helps reading the best at which point (Paris & Flukes, 2005; Pressley, 2001; Zhang & Wu, 2009). Being able to use these strategies promotes learner autonomy, thus leads to self-regulated learning (Aghaie & Zhang, 2012; Reutzel, 2017; Snow, 2002). When strategic thinking is developed, reading fluency and motivation can be increased (Kazi, Mokhal, & Ashad, 2020; Pressley, 2002). Reading strategies can be learnt most effectively if they are embedded in context (Baker, 2005; Van Dijk & Kintsch, 1983) and taught by explicit instruction (Chen & Chen, 2015; Guo, 2018), where strategies are taught in combination instead of focusing on only one type (Okkinga et al., 2018). Although students are often only required to read the text from the first word going left to right till the last word is reached, in reality, there are way more effective possibilities to achieve deep and meaningful comprehension (Isakson & Isakson, 2017). Examples for these other effective strategies can be detected by examining experienced readers' reading process (Pressley & Gaskin, 2006).



Therefore, a good reader considers his/her goal regarding the reading of the text, quickly goes through the text and activates previous knowledge connected to the text and makes a plan before reading. During reading they make predictions and inferences, use text structure, and read selectively (identify and reread important information but skip less relevant parts); they take notes, reflect, evaluate and monitor the text. Then they selectively reread, ask themselves questions, summarise, reflect and monitor after reading (e.g. Okkinga et al., 2018; Pressley & Gaskin, 2006; Veenman, 2017). Thus it can be seen that readers are not at all passive recipients of information written in the text, but actually are very active and engage in their reading act (Follmer & Sperling, 2018; McNamara & Magliano, 2009).

Reading and background variables

In the following those background factors are briefly described which are often researched and are accounted for in the present study. These are gender; teaching experience; reading habits; level of education where they teach; and metalinguistic awareness as in subject areas, L2 proficiency level, number of L2s known. Since teachers' reading is quite neglected in contemporary research (cf. Broemmel, Evans, Lester, Rigell, & Lochmiller, 2019), these background factors are demonstrated in general.

Gender differences are often studied in the field of education. It is well-established that in reading research girls often outperform boys in reading. But does that difference remain in adulthood? A Hungarian representative study found that women are more likely to be members of libraries and read more books (Tóth, 2020). Lannert and Holb (2020) says that it seems based on results from PIAAC that Hungarian girls' head start in reading disappears. Although when workplace was controlled in this data it was found that women use their reading skills more intensively compared to men. Considering reading strategies in research, among teachers (Koulianou & Samartzi, 2018) and teacher trainees (Asikcan & Saban, 2018) it was found that female participants showed significantly higher awareness of reading strategies.

Teachers' majors and teaching experience are considered to be important aspects of teacher quality and are often researched as related to students' reading performance (Myberg, Johanson, & Rosén, 2019). It has been concluded that well-qualified and experienced teachers' students can reach better understanding of texts (e.g. Wu, Valcke, & Van Keer, 2019). However, Koulianou and Samartzi (2018) found no connection between teachers' reading strategy use and the above teacher qualities.

Metalinguistic awareness is reflecting on, and manipulating, language (Nagy, 2007), when language forms and structures become transparent to help the comprehension of the meaning intended to be conveyed (Cazden, 1974). It is an explicit knowledge which allows to recognise underlying patterns and rules in language (Woll, 2019). Metalinguistic awareness has been identified as a key factor in successful reading comprehension by several studies (e.g. Duke, Pearson, Strachan, & Billman, 2011; Mahaptra, 2015). Research has shown that language learners with more experience of an L2 have a higher level of metalinguistic awareness (Nergis, 2013; Woll, 2019). Thus those with higher level of L2 proficiency are expected to reach higher level of metalinguistic awareness. Having and activating explicit knowledge of linguistics and strategies and gaining experience in these has been found to enhance reading comprehension (Nergis, 2013) as well as to support learning (Grabe & Stoller, 2020).



Reading habits are often researched and play an important role in teachers' performance (Burgess, Sargent, Hill & Morrison, 2011). However, reading habits are usually not used in research as a background variable. It has been found that watching movies or surfing the Internet were more favoured by teachers as a leisure activity compared to reading (Tharumaraj & Noordin, 2011) and they prefer reading shorter texts (Tóth, 2020). They do read professional literature but its frequency is rather varied in time (Broemmel et al., 2019) and other means of professional development are preferred compared to reading professional literature (Kálmán, 2019). A limited range of text types are read in L2 by teachers (Rwoo, Peng & Halim 2020). Reading different text types or genres, also spending more time with reading are important ways of improving text comprehension (Griffo, Madda, Pearson & Raphael, 2015; Józsa & Steklács, 2012). Thus the above findings might be worrying as looking at teachers' reading.

In the present study the focus is on whether these background factors are related to teachers' own reading strategy use.

RESEARCH QUESTIONS

Although we know that the above factors are important contributors to reading comprehension, it remains a questions whether these are connected to teachers' reading strategy use. It has been shown that teachers have a relevant influence on their students when the knowledge of reading strategies are considered, too (e.g. Soodla, Kikas & Jogi, 2017). In the present study I sought to identify what relationships can be detected between teachers' own reading and background variables. Thus the following questions were posed:

- Is there a connection between teachers' L1 and L2 reading strategy use and their reading habits in L1 and L2 and the level of education where they teach?
- Is there difference in teachers' L1 and L2 reading strategy use by the background variables of gender, teaching experience, majors, L2 proficiency level and number of L2s?

METHODS

Sample

A request to participate in the study was sent to approximately 3,600 email addresses to those who were attending or had attended a major Hungarian University's MA teacher training program between 2000–2018. Furthermore, snowball method was used when involving those who taught at a major language school in Hungary. $N = 327$ respondents filled in the questionnaire. $N = 256$ respondents were selected for the present analysis, those who had qualified as teachers by the time of the data collection. The participants' teaching experience ranges from 0 to 42 years, the majority are early-career teachers. They have knowledge of 0–5 L2s and they predominantly have intermediate or advanced L2 proficiency levels based on respondents' self-report. Most of them are female (73%) and teach in public education and/or have private students. In Hungary, teachers are required to earn their degree in at least two majors. In the present sample teachers' majors mostly included at least one L2 and one other major, or an L2 and Hungarian. The detailed composition of the sample is presented in Table 1.



Table 1. Sample characteristics by background factors

Background variables		Frequency (%)
Gender	Male	27
	Female	73
Level of education where they teach	Kindergarten	6
	Primary school	56
	Secondary school	67
	Tertiary education	14
	Adult education	17
	Private students	42
	Other	5
Majors	At least one L2	32
	Hungarian and not L2	15
	An L2 and Hungarian	6
	Other	46
Level of L2 proficiency	No	3
	Basic	15
	Intermediate	37
	Advanced	44
Number of L2s	0	3
	1	28
	2	44
	3	20
	4	3
	5	2
Teaching experience	0–5 years	35
	6–9 years	11
	10–19 years	22
	20–29 years	19
	30 < years	12

The instrument

An online, anonymous self-report questionnaire was administered. Teaching experience was divided into six categories based on the years spent with teaching indicated by respondents (0–5 years, 6–9 years, 10–19 years, 20–29 years, 30 ≤ years). Regarding what subjects they obtained their teaching degree in, respondents indicated 68 different subjects. During coding these were grouped into four categories:

- at least one L2 subject and the other is not Hungarian language and literature;
- Hungarian and the other subject is not an L2;
- an L2 and Hungarian;
- all other.

The aim of this grouping was to be able to determine how metalinguistic awareness makes a difference. The item in the questionnaire referring to L2 level asked respondents to indicate their L2 proficiency level by their own judgement (regardless of passing a language exam or not). The



highest L2 level indicated was used in the study for participants who reported the knowledge of more than one L2. For teaching platform six categories were created based on teachers' answers. The last category is named "other", which refers to answers such as teaching at camps or running extracurricular activities. Two closed questions inquired about teachers' L1 and L2 reading habits, where respondents indicated the frequency of reading texts related to various communicative purposes on a 5-point intensity scale: electronic communication (email and social media), learning about events around the world (news), professional development (professional literature) and cultural awareness (fiction).

The original MARSII questionnaire, created by Mokhtari and Reichard (2002), is a widely used and validated instrument. It enquires about how often the reader uses each of 30 metacognitive reading strategies. The strategy statements can be used as indicators for reading strategy use. These are organised into three groups, which are as follows. Global reading strategies help to gain a global overview of the text, they prepare reading. E.g. "I have purpose in my mind when I read (Mokhtari & Reichard, 2002, 258)." Problem-solving reading strategies are used when reading gets difficult, they help the reader navigate in the texts. E.g. "I read slowly but carefully to be sure I understand what I'm reading (Mokhtari & Reichard, 2002, 258)." Support reading strategies provide external help like taking notes and using dictionaries. E.g. "I discuss what I read with others to check my understanding (Mokhtari & Reichard, 2002, 258)." The questionnaire includes the items of the Hungarian version of the instrument (Molitorisz, 2009). Respondents can indicate their answer on a 5-point intensity scale. In the present study this was changed into a dichotomous scale. Information about the level of reading strategy use is lost by only requesting a yes or no answer about reading strategy use in L1 or L2. The reduction of information seemed a trade-off, considering the length of the instrument, which corresponded to the aims of a larger project. The original questionnaire targeted reading strategy use when learning. In the present study teachers were asked to think about these reading strategies in general.

The psychometric properties of the instrument

L1 and L2 reading strategies were considered as a questionnaire and reliability was tested: Cronbach alfa = 0.9. Exploratory factor analysis was run for L1 and L2 reading strategies. Small coefficients were extracted from the analysis (below 0.35 value). Considering L1 reading strategies, the KMO Index is 0.8. Three factors were formed by Varimax Rotation but it did not reproduce the three strategy groups of the original MARSII instrument. If the questionnaire followed the original instruments' three groups, the following items would be in one factor: global reading strategies: 1-13; problem-solving reading strategies: 14-21; support reading strategies: 22-30. In L1, $N = 3$ global-, $N = 3$ problem-solving-, and $N = 1$ support reading strategies were excluded due to low value. The first factor includes eight support reading strategies and one global reading strategy. Its eigenvalue is 5.8, the variance 19.6% and the cumulative variance 19.6%. The second includes three global-and three problem-solving reading strategies. The eigenvalue is 2, the variance is 6.6% and the cumulative variance is 26.2%. The third factor consists of seven global reading strategies. The eigenvalue is 1.5, variance is 5.1% and the cumulative variance is 31.4%.

When L2 reading strategies are concerned the KMO Index is 0.9. No items were excluded due to low value. The factor structure here is less conclusive than in the case of L1 items. The



first factor includes 11 global-, 5 problem-solving- and 3 support reading strategies. Its eigenvalue is 10.8, the variance 36.1% and the cumulative variance 36.1%. The second includes 2 global-and 1 problem-solving and 3 support reading strategies. The eigenvalue is 1.8, the variance is 6% and the cumulative variance is 42.1%. The third factor consists of 1 problem-solving and 3 support reading strategies. The eigenvalue is 1.3, variance is 4.64% and the cumulative variance is 46.8%.

RESULTS

Reading strategy use

ANOVA was run to establish differences between teachers' L1 and L2 reading strategy use. As it is shown in Table 2, in L1 the three strategy groups significantly differ from each other. Respondents reported the highest use of global reading strategies followed by problem-solving and support reading strategies. In L2, the use of global reading strategies is significantly higher than that of the two other groups. Comparing languages, global and support reading strategy use was significantly higher in L1 than in L2, while no difference was found for the problem-solving reading strategy groups.

Although gender most often makes a difference in reading strategy use among adults as well in favour of women, this was not the case in this study. Qualification and teaching experience are considered to be important aspects of teachers' quality, but in this study these variables did not differentiate teachers' reading strategy use. None of these three variables showed significant difference in L1 and in L2 reading strategy use.

Reading habits

Correlation was run in order to identify whether reading strategy use and reading habits are related. In L1 there was no significant correlation between the four texts and the reading strategy groups. However, in L2 significant and very strong ($r = 0.45-0.58$) correlation was found between the reading of each text in L2 and the three L2 reading strategy groups (Table 3).

Table 2. Teachers' reading strategy use in L1 and L2

Reading strategies	Reading strategy (N of items)	L1 M	L1 SD	L2 M	L2 SD
Global	13	7.9	3	6.3	4.2
Problem-solving	8	4.5	2	4.1	2.7
Support	9	3.1	2.3	2.6	2.3

Table 3. Correlations between L2 reading strategy groups and L2 reading habits (r)

	News	Email and social media	Professional literature	Fiction
Global	0.56	0.53	0.58	0.47
Problem-solving	0.55	0.55	0.58	0.53
Support	0.55	0.54	0.56	0.45



Level of education where teachers teach

There was one significant weak ($r = 0.19$) correlation between L1 global reading strategies and teaching in primary school. L2 reading strategy use had weak, significant correlations with tertiary education (global $r = 0.13$, problem-solving $r = 0.16$, support $r = 0.14$), private students (global $r = 0.22$, problem-solving $r = 0.21$, support $r = 0.22$), and adult education (global $r = 0.14$, problem-solving $r = 0.16$, support $r = 0.14$). There were no significant correlations between L1 and L2 reading strategy use and the kindergarten, the secondary school and the “other” categories.

Subjects

The ANOVA showed no significant difference between various subjects and reading strategy use in L1. It did reveal a difference, however, in the case of L2 reading strategy use. There was one significant difference between those who have at least one L2 subject and those who teach subjects labelled “other” (Table 4).

L2 level

The ANOVA showed no difference in L1 reading strategy use by L2 level of proficiency. Significant differences showed, however, in L2. Based on Tukey’s B Post Hoc analysis two groups can be distinguished: no L2 knowledge and basic L2 proficiency; intermediate and advanced L2 proficiency. Those with higher L2 level use more reading strategies (Table 5).

Number of L2s

There is significant difference in reading strategy use based on the number of L2s known. Dunette T3 Post Hoc analysis showed significant difference between those who know only one L2 compared to those with knowledge of two or three L2s. Means show in Table 6 that those with knowledge of one L2 use fewer reading strategies.

Table 4. Difference in L2 reading strategy use by teachers' majors

Subjects	Frequency of participants (%)	L2 M	L2 SD
L2 and Hungarian	6	15	7.4
Hungarian (and not L2)	15	14	8.7
L2 (and not Hungarian)	32	17.2	6.4
Other	47	9.9	8.5

Table 5. Teachers' L2 reading strategy use by L2 level

L2 level	Frequency of participants (%)	L2 M	L2 SD
No	3	3.1	8.3
Basic	15	5.3	8.6
Intermediate	37	12.9	7.8
Advanced	44	16.7	6.5



Table 6. Teachers' L2 reading strategy use by number of L2s known

Number of L2s	Frequency of participants (%)	L2 M	L2 SD
0	3	3.1	8.3
1	28	9.6	9.1
2	44	14.6	7.6
3	20	16	7.5
4	3	13.8	6.9
5	2	15.5	5.7

DISCUSSION

Firstly, in the present study teachers' L1 and L2 reading strategy use was examined. Means show that teachers rely on about half or less of the reading strategy repertoire in the instrument. Support reading strategies are used less which is in accordance with findings of studies investigating reading strategies with the MARSII (e.g. [Chen & Chen, 2015](#)). Since these reading strategies provide additional, external help, like writing notes or using dictionaries, it is a good sign that teachers apply higher order thinking processes (which are required when applying strategies from global- and problem-solving reading strategy groups). However, results show that it seems there is still room for development in this area. Teachers use more global and support reading strategies in L1 than in L2, while reliance on the problem-solving group is not different. That might be because problem-solving reading strategies are especially useful when the text gets difficult, thus they might be more beneficial when reading L2 texts as well.

Against expectations gender and teaching experience did not make a difference. This can be due to the characteristics of the sample. There is a tendency of mostly women choosing the teaching profession. [Varga \(2019\)](#) reports Hungarian data on education, which shows that the ratio of female teachers in schools funded by the state or local governments is 83%. But in schools of other maintainers (e.g. the Church or foundations) there is high ratio of female teachers as well. This tendency can be seen too in the present study. Concerning teaching experience, majority of participants are early-career teachers. Thus the big differences between groups of these background variables are probably the reason why there was no significant difference in their reading strategy use. As a next step, categories could be modified by creating two groups: novice (0–5 years) and experienced teachers. Comparing the two groups certain tendencies might be detected.

Data only slightly indicated that teachers of some learner groups differ from others in using reading strategies. Making inferences of such low correlations would be farfetched, thus further investigation is needed.

Significant correlation between L2 reading strategy use and L2 reading habits was found. That means when teachers read more, they use more reading strategies. Or the other way around: reading less means using less reading strategies. This analysis does not show which variable affects the other, at the same time, it can be seen that these variables, namely L2 reading habits and L2 reading strategy use are indeed connected.

Majors, number of L2s and L2 proficiency did make a difference in L2 reading strategy use. Results show that higher proficiency in an L2 is associated with higher L2 reading strategy use. This is apparent from data about number of L2s and L2 level, but looking at majors, results are



more varied. The categories where Hungarian language teachers are included are underrepresented in the sample. Probably that is why there was no difference in their case compared to the category labelled “other”. Means did show the tendency of higher use of reading strategies among those with L1 or L2 language majors. Although there were no significant differences. In the present categorization those who have at least one L2 as their major have another L2, or a subject falling into “other” category as their other major. It would be interesting to see whether there is significant difference between these categories. Although those who have at least one L2 might have another major that would be in category “other”, it seems having an L2 as their major means an advantage when using reading strategies. Since when the “other” category was compared to at least one L2 group, means showed lower reading strategy use in the case of two “other” majors. The difference might be due to metalinguistic awareness, or the difference in the training these different groups had received.

CONCLUSION

This study contributes to the existing knowledge on L1 and L2 reading strategy use research in light of background variables. In this sample teachers used more reading strategies in L1 than in L2, but there was no background factor that would make a difference in L1 reading strategy use. Thus further investigation is needed to establish whether the background variables involved in this research make a difference in a sample with more divergent composition. Also additional background variables are needed. When a group can be localised who are less strategic readers based on their own report, more efficient help can be provided for their improvement. Although the present research does not tell the direction of the relationship of L2 reading strategies with L2 proficiency, number of L2s, majors and reading habits it can be established that these are important variables in teachers’ reading strategy use. There has been no information on Hungarian teachers’ reading strategy use in light of background factors before, thus this study provides information which might start to fill this gap.

ABOUT THE AUTHOR

The author of this article is a PhD student at the Doctoral School of Education, University of Szeged. She earned her MA degree as a teacher of educational science and as a teacher of English language and culture and has experience in teaching education courses at university level and teaching English in language schools. Her research interest concerns L1 and L2 reading strategy use, reading habits, and beliefs related to teaching reading in L1 and L2 classes among teachers and teacher trainees. She is a member of the editorial team of the *Iskolakultúra* journal as the copy editor of English abstracts. She is also a member of the SZTE-MTA Reading and Motivation Research group in Szeged.

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REFERENCES

- Afflerbach, P., Pearson, P. D., & Paris, S. D. (2008). Clarifying differences between reading skills and reading strategies. *The Reading Teacher*, 61(5), 364–373.
- Afflerbach, P., Pearson, P. D., & Paris, S. D. (2017). Skills and strategies: Their differences, their relationships and why they matter. In K. Mokhtari (Ed.), *Improving reading comprehension through metacognitive reading strategies instruction* (pp. 33–49). Lanham, Maryland: Rowman & Littlefield.
- Aghaie, R., & Zhang, L. J. (2012). Effects of explicit instruction in cognitive and metacognitive reading strategies on Iranian EFL students' reading performance and strategy transfer. *Instructional Science*, 40, 1063–1081.
- Alderson, J. C., & Cseresznyés, M. (2003). *Reading and use of English*. Budapest: Teleki László Foundation.
- Asikcan, M., & Saban, A. (2018). Prospective teachers' metacognitive awareness levels of reading strategies. *Cypriot Journal of Educational Sciences*, 13(1), 23–30.
- Baker, L. (2005). Developmental differences in metacognition: Implications for metacognitively oriented reading instruction. In S. E. Israel, C. C. Block, K. L. Bauserman, & K. Kinnucan-Welsch (Eds.), *Metacognition in literacy learning. Theory, assessment, instruction and professional development* (pp. 61–79). New Jersey: Lawrence Erlbaum Associates.
- Broemmel, A. D., Evans, K. R., Lester, J. N., Rigell, A., & Lochmiller, C. R. (2019). Teacher reading as professional development: Insights from a national survey. *Reading Horizons: A Journal of Literacy and Language Arts*, 58(1), 1–21.
- Burgess, S. R., Sargent, S., Smith, M., Hill, N., & Morrison, S. (2011). Teachers' leisure reading habits and knowledge of children's books: Do they relate to the teaching practices of elementary school teachers? *Reading Improvement*, 48, 88–102.
- Cazden, C. R. (1974). Play with language and metalinguistic awareness: One dimension of language experience. *Urban Review*, 7, 28–29.
- Chen, K. T.-Z., & Chen, S. C. L. (2015). The use of EFL reading strategies among high school students in Taiwan. *The Reading Matrix: An International Online Journal*, 15(2), 156–166.
- Duke, N. K., Pearson, P. D., Strachan, S. L., & Billman, A. K. (2011). Essential elements of fostering and teaching reading comprehension. In S. J. Samiels, & A. E. Farstrup (Eds.), *What research has to say about reading instruction (Vol. 4)*, pp. 286–314. Newark, DE: International Reading Association.
- Follmer, D. J., & Sperling, R. A. (2018). Interactions between reader and text: Contributions of cognitive processes, strategy use, and text cohesion to comprehension of expository science text. *Learning and Individual Differences*, 67, 177–187.
- Grabe, W., & Stoller, F. L. (2020). *Teaching and researching reading. Third Edition. Applied Linguistics in action*. New York and London: Routledge.
- Greaser, A. C. (2007). An introduction to strategic reading comprehension. In D. S. McNamara (Ed.), *Reading comprehension strategies: Theories, interventions, and technologies* (pp. 3–26). New York: Lawrence Erlbaum Associates.
- Griffo, V. B., Mada, C. L., Pearson, P. D., & Raphael, T. E. (2015). Current issues and best practices in literacy instruction. In L. B. Gambell, & L. M. Morrow (Eds.), *Best practices in literacy instruction* (pp. 37–60). New York: The Guilford Press.



- Guo, L. (2018). Modelling the relationship of metacognitive knowledge, L1 reading ability, L2 language proficiency and L2 reading. *Reading in a Foreign Language*, 30(2), 209–231.
- Isakson, R. L., & Isakson, M. B. (2017). Preparing college students to learn more from academic texts through metacognitive awareness of reading strategies. In K. Mokhtari (Ed.), *Improving reading comprehension through metacognitive reading strategies instruction* (pp. 155–175). London: Rowman & Littlefield.
- Jou, Y.-J. (2015). Investigation of technological university students' use of metacognitive reading strategies in first and second languages. *English Language Teaching*, 8(1), 180–188.
- Józsa, K., & Steklács, J. (2012). Content and curriculum aspects of teaching and assessment of reading. In B. Csapó, & V. Csépe (Eds.), *Framework for diagnostic assessment of reading* (pp. 79–128). Budapest: Nemzeti Tankönyvkiadó.
- Kálmán, O. (2019). A felsőoktatás oktatói: elképzeléseik a tanításról és a saját szakmai tanulásukról. *Magyar Pedagógia*, 119(3), 173–197.
- Kazi, A. S., Moghal, S., & Asad, Z. (2020). Metacognitive awareness of reading strategies for academic materials: A study of undergraduate students in Pakistan. *Global Social Sciences Review*, 5(1), 44–51.
- Koulianou, M., & Samartzi, S. (2018). Greek teachers metacognitive awareness on reading strategies. *New Trends and Issues Proceedings on Humanities and Social Sciences*, 5(1), 68–74.
- Lannert, J., & Holb, É. (2020). Jó pap holtig tanul, avagy a PIAAC felnőtt írásbeliség vizsgálat tanulságai. In T. Kolosi, I. Szelényi, & I. Gy. Tóth (Eds.), *Társadalmi Riport* (pp. 221–243). Budapest.
- Mahaptra, S. (2015). Cognitive training and reading remediation. *Journal of Education and Practice*, 6(19), 57–63.
- McNamara, D. S., & Magliano, J. (2009). Toward a comprehensive model of comprehension. *Psychology of Learning and Motivation*, 51, 298–384. In B. H. Ross (Ed.), *The psychology of learning and motivation* (pp. 297–384). Elsevier Academic Press.
- Mokhtari, K., & Reichard, C. A. (2002). Assessing students' metacognitive awareness of reading strategies. *Journal of Educational Psychology*, 94(2), 249–259.
- Molitorisz, A. (2009). Szakközépiskolás tanulók olvasásstratégia-használatának felmérése a MARSÍ kérdőívvel. *Magyar Pedagógia*, 109(3), 287–313.
- Myrberg, E., Johanson, S., & Rosén, M. (2019). The relation between teacher specialization and student reading achievement. *Scandinavian Journal of Educational Research*, 63(5), 744–758.
- Nagy, W. (2007). Metalinguistic awareness and the vocabulary-comprehension connection. In R. K. Wager, A. E. Muse, & K. R. Tannenbaum (Eds.), *Vocabulary acquisition: Implications for reading comprehension* (pp. 52–77). New York: Guilford.
- National Reading Panel (2000). *Teaching children to read: An evidence-based assessment of scientific research literature on reading and its implications for reading instruction*. Washington: National Institute of Child Health and Human Development.
- Nemzeti Alaptanterv (2020). A Nemzeti alaptanterv kiadásáról, bevezetéséről és alkalmazásáról. Korm. Rendelet. *Magyar Közlöny*, 3.
- Nergis, A. (2013). Exploring the factors that affect reading comprehension of EAP learners. *Journal of English for Academic Purposes*, 12(1), 1–9.
- OECD (2019). *PISA 2018 results (Volume I): What students know and can do*. Paris: OECD Publishing.
- Okkinga, M., van Steensel, R., van Gelderen, A. J. S., van Schooten, E., Slegers, P. J. C., & Arends, L. R. (2018). Effectiveness of reading strategy interventions in whole classrooms: A meta-analysis. *Educational Psychology Review*, 30(1), 1215–1239.



- Palincsar, A. S., & Brown, A. L. (1984). Reciprocal teaching of comprehension fostering and monitoring activities: Cognition and instruction. *Cognition and Instruction*, 1(2), 117–175.
- Paris, S. G., & Flukes, J. (2005). Assessing children's metacognition about strategic reading. In S. E. Israel, C. C. Block, K. L. Bauserman, & K. Kinnucan-Welsch (Eds.), *Metacognition in literacy learning. Theory, assessment, instruction and professional development* (pp. 121–139). New Jersey: Lawrence Erlbaum Associates.
- Pressley, M. (2001). Comprehension instruction: What makes sense now, what might make sense soon. *Reading Online*, 5(2), 1–14.
- Pressley, M. (2002). Metacognition and self-regulated comprehension. In A. Farstrup, & S. Simons (Eds.), *What research has to say about reading instruction* (pp. 291–309). Newark, DE: International Reading Association.
- Pressley, M., & Gaskin, I. W. (2006). Metacognitively competent reading comprehension is constructively responsive reading: How can such reading be developed in students? *Metacognition Learning*, 1, 99–113. <https://doi.org/10.1007/s11409-006-7263-7>.
- Reutzel, D. R. (2017). The construction-integration model of text comprehension: A lens for teaching the common core reading standards. In K. Mokhtari (Ed.), *Improving reading comprehension through metacognitive reading strategies instruction* (pp. 69–92). Lanham, Maryland: Rowman & Littlefield.
- Rwoo, S. A., Peng, C. F., & és Halim, H. A. (2020). A study on Malaysian English language teachers' reading habits: Types of materials read and rate of extensive reading. *Language*, 3(10), 18–34.
- Schnotz, W., & Molnár, E. K. (2012). Societal and cultural aspects of the assessment of reading literacy. In B. Csapó, & V. Csépe (Eds.), *Framework for diagnostic assessment of reading* (pp. 79–128). Budapest: Nemzeti Tankönyvkiadó.
- Snow, C. (2002). *Reading for understanding. Toward and R&D program in reading comprehension*. RAND.
- Soodla, P., Jögi, A. L., & Kikas, E. (2017). Relationships between teachers' metacognitive knowledge and students' metacognitive knowledge and reading achievement. *European Journal of Psychology of Education*, 32, 201–218.
- Steklács, J. (2018). PISA 2015 után, PISA 2018 előtt. A szövegértő olvasás fejlesztésének, tanításának feladatai. *Könyv és Nevelés*, 20(1), 30–49.
- Tharumaraj, J. N., & Noordin, N. (2011). Analysing teachers' reading habits and teaching strategies for reading skills. *Malaysian Journal of ELT Research*, 7(1), 203–245.
- Tóth, E. (2015). Az Országos kompetenciamérés hatása a tanítási munkára pedagógusinterjúk alapján. *Magyar Pedagógia*, 115(2), 115–138.
- Tóth, M. (2020). A hazai felnőtt lakosság olvasási és könyvtárhasználati szokásai 2019-ben. In „Az én könyvtáram” (Eds.) *Módszertani mozaikok: Kutatások és válogatott tanulmányok gyűjteménye* (pp. 277–317). Budapest: Fővárosi Szabó Ervin Könyvtár.
- Van Dijk, T. A., & Kintsch, W. (1983). *Strategies of discourse comprehension*. New York: Academic Press.
- Varga, J. (2019). *A közoktatás indikátorrendszere*. Budapest: MTA Közgazdaság- és Regionális Tudományi Kutatóközpont Közgazdaság-tudományi Intézet. https://kti.krtk.hu/wp-content/uploads/2020/01/A_kozoktatasi_indikatorrendszere_2019.pdf.
- Veenman, M. V. J. (2017). Assessing metacognition in reading processes: Offline versus online measures. In K. Mokhtari (Ed.), *Improving reading comprehension through metacognitive reading strategies instruction* (pp. 51–68). Lanham, Maryland: Rowman & Littlefield.
- Woll, N. (2019). How French speakers reflect on their language: A critical look at the concept of meta-linguistic awareness. *Language Awareness*, 28(1), 49–73.



Wu, L., Valcke, M., & Van Keer, H. (2019). Factors associated with reading comprehension of secondary school students. *Educational Sciences: Theory and Practice*, 19(4), 34-47.

Zhang, L. J., & Wu, A. (2009). Chinese senior high school EFL students' metacognitive awareness and reading-strategy use. *Reading in a Foreign Language*, 21(1), 37-59.

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