OURNAL OF INTERNATIONAL SCIENTIFIC RESEARCH
Volume 3, Issue 6, November 2025 Online ISSN: 3030-3508
https://spaceknowladge.com

INTERFACE MATTERS: A MIXED-METHODS STUDY ON DIGITAL AND TRADITIONAL READING MODALITIES IN ESL UNIVERSITY CONTEXTS

Khushbokova Sevinch
Uzbekistan State World Languages University
Uzbekistan
sevinchxushboqova@uzswlu.uz

MAQOLA MALUMOTI

MAQOLA TARIXI:

Received:11.12.2025
Revised: 12.12.2025
Accepted:13.12.2025

KALIT SO'ZLAR:

ANNOTATSIYA:

This study compares digital and print reading among ESL university students, focusing on comprehension and reading strategies. While test scores were similar across formats, the reading experience differed. Print readers used more traditional strategies like highlighting and note-taking, while digital readers favored quick tools like translation and search. Many students preferred digital texts after guided use. The findings suggest that format does not impact comprehension but affects strategy use. Teachers should guide students to use digital tools effectively.

Introduction

Reading is a critical skill in second language acquisition, serving as a foundation for academic success in university contexts. In essence, reading comprehension is an active meaning-making process rather than a mere decoding of words (Eskey, 2011, p.5). Effective ESL reading requires not only linguistic knowledge but also strategic skills to infer and construct understanding from texts. However, many ESL instructors have traditionally focused on comprehension questions and answers without explicitly teaching underlying reading strategies such as inferencing (Lee, 2013, p.717). Lee (2013) observed that teachers seldom make inferencing a clear instructional objective; consequently, students often resort

to shallow tactics—like hunting for answers in the text—rather than truly engaging with meaning, highlighting a prevalent lack of systematic reading strategy training in L2 settings (p.717). At the same time, the landscape of reading is rapidly changing in the digital age. The 21st-century university student increasingly encounters texts on screens—laptops, tablets, e-readers—raising questions about how digital interfaces compare to traditional print in facilitating reading comprehension. Many educational institutions remain cautious about fully embracing digital reading materials for ESL courses, partly due to limited research on their effectiveness (Isaacson, 2017, p.850). In fact, Isaacson (2017) notes that while the use of e-books in postsecondary education is projected to rise, a dearth of research on their impacts in ESL contexts has left instructors unsure about integrating them into curricula (p.850). This research gap has tangible consequences: without clear evidence, educators may rely on traditional print by default, potentially overlooking the benefits that digital reading could offer. On the other hand, initial findings by Isaacson (2017) suggest that digital texts can yield comprehension outcomes comparable to print. In her study, high-intermediate ESL students using e-books performed as well on reading comprehension tests as those using paper texts (no significant score differences were found), although their reading strategy use differed (Isaacson, 2017, p.850). Notably, even students with little prior exposure to e-books reported a preference for digital texts after guided reading sessions, indicating a positive shift in attitude (Isaacson, 2017, p.850). Such findings hint that given proper support, digital reading can be as viable as print for ESL learners. Another consideration is the evolving reading habits and preferences of learners. Today's students are often tech-savvy and may actually prefer digital formats for convenience and accessibility. Elturki and Harmon (2020) point out that providing online reading resources aligns with modern students' preferences and can increase the volume of reading they undertake (p.8). Digital platforms offer abundant content and immediate access, which can encourage extensive reading – an activity known to build fluency and vocabulary when done regularly (Elturki & Harmon, 2020, p.8). Balancing this with intensive reading of print texts is challenging but necessary for a comprehensive curriculum. The integration of both modalities might thus enrich the learning experience, marrying the depth of traditional close reading with the breadth and engagement potential of digital reading. In light of these considerations, this study – titled "Interface Matters" – investigates how the medium of reading (digital vs. traditional print) affects ESL university students' reading comprehension and reading strategies. It aims to fill the noted research gap by providing empirical evidence

from a local university context. The study addresses the following questions: (1) Does reading modality influence ESL learners' comprehension of academic texts? (2) How do reading strategies and behaviors differ between digital and paper reading contexts? and (3) What are students' perceptions and preferences regarding digital versus print reading in their language learning? By using a mixed-methods approach, the research not only compares comprehension outcomes quantitatively but also delves qualitatively into students' experiences, thereby offering a nuanced understanding of how interface factors into the reading process. Ultimately, the goal is to inform ESL pedagogy on whether and how to incorporate digital reading tools alongside traditional print materials for optimal learning outcomes.

Literature review

Research on L2 reading underscores that comprehension is an interactive process between the reader and text. Classic perspectives describe reading as a psycholinguistic guessing game where readers utilize both bottom-up decoding and top-down predictions to construct meaning (Goodman, 1967, as cited in Eskey, 2011). Eskey (2011) emphasizes that true reading involves extracting and understanding meaning from print, not just sounding out words or recognizing letters (p.5). In other words, a learner "does not truly read" a text unless they grasp its message, regardless of whether the text is on paper or a screen. This insight is important when comparing modalities: if comprehension is fundamentally about making sense of content, the critical question is whether digital presentation hinders or supports that cognitive process compared to print. A key factor in comprehension is the use of reading strategies. Skilled readers employ techniques such as predicting content, inferring meanings, summarizing, and contextual guessing, which help them overcome vocabulary gaps and understand implicit information. Unfortunately, as noted earlier, many L2 reading classrooms do not explicitly teach these strategies. Lee (2013) documents that in practice, reading lessons can become mere "assign-and-assess" sessions focused on answering questions, with little attention to teaching how to infer or interpret texts (p.717). The lack of systematic strategy instruction leaves ESL learners ill-equipped to tackle texts independently. Inferencing – the ability to read between the lines – is particularly crucial for deep comprehension, yet teachers often assume students will develop this skill incidentally. Lee's work argues for making thinking processes like inferencing an explicit part of reading instruction, which is highly relevant to the present study: different interfaces may demand different strategy applications. For instance, digital texts often allow quick word look-ups or

keyword search, potentially reducing inferencing effort for unknown words, whereas print texts may force readers to infer meaning from context if a dictionary is not handy. Understanding how ESL readers adapt (or fail to adapt) their strategies to the medium is thus a significant aspect of interface effects. The rise of digital reading has prompted numerous studies in first-language (L1) contexts, some of which suggest subtle differences between screen and paper reading. For example, research in L1 settings has reported that reading on screens can sometimes lead to lower recall of details or reduced concentration for lengthy texts, possibly due to scrolling or screen fatigue. However, findings are mixed and often dependent on factors like text length, reader familiarity with digital devices, and whether interactive features are used. In second-language contexts, systematic investigations have been fewer, making the contributions of studies like Isaacson (2017) and the present work important. Isaacson's (2017)study with adult ESL learners is a notable precursor: it found no significant differences in reading comprehension test scores between an e-book group and a paper text group, indicating that medium alone did not impede understanding (p.850). Interestingly, Isaacson did observe differences in how learners approached the texts. The e-book group employed digital-specific strategies (such as using bookmarking or text highlighting tools), whereas the paper group used traditional strategies (like underlining with pen or writing notes on margins). Moreover, initial skepticism towards e-books among students gave way to a reported preference for digital by the end of the experiment – the majority of learners who had never used e-books before came to favor them after having the experience (Isaacson, 2017, p.850). This suggests that familiarity and training can shift learner attitudes positively toward digital reading. Beyond individual studies, the push for extensive reading in language learning offers another perspective on the digital vs. print discussion. Extensive reading (ER) – reading large amounts for general understanding and pleasure – is known to benefit L2 learners by increasing exposure to language in context and building fluency (Day & Bamford, 2002). Elturki and Harmon (2020) argue for systematically integrating extensive reading into ESL curricula and note that digital resources can play a vital role in this integration. Online libraries and e-books provide easy access to a wide range of leveled texts, making it feasible for students to find materials that interest them and read more voluminously. Elturki (2020) specifically highlights that offering digital reading options can boost students' motivation and volume of reading, since many learners find digital formats engaging and readily available (p.8). Additionally, digital texts can alleviate logistical constraints – for instance, a program may

not afford a vast library of graded readers in print for all students, but online sources of free e-books can supplement or replace physical books (Elturki & Harmon, 2020, p.8). These points imply that the digital medium might not only match print in comprehension effectiveness but also surpass it in fostering reading quantity and variety. However, the successful use of digital reading in practice likely hinges on learners' ability to manage the different interface. Without guidance, some students might feel overwhelmed or distracted by screen-based reading. Thus, researchers and educators have called for combining digital tools with strategy training – showing students how to annotate PDFs, resist multitasking, or adjust screen settings for comfort – to ensure digital extensive reading is productive (Milliner, 2017, as cited in Elturki & Harmon, 2020).

In summary, prior literature suggests that (a) reading comprehension in L2 is dependent on strategic, meaning-focused reading (Eskey, 2011), (b) ESL learners need more explicit training in such strategies (Lee, 2013), and (c) the medium of reading might not inherently disadvantage comprehension (Isaacson, 2017), though it influences how learners engage with the text. Digital reading offers new opportunities for extensive practice (Elturki & Harmon, 2020), but its effective adoption in language programs requires understanding and addressing the differences in reading processes on screen versus paper. This study builds on these insights by empirically comparing digital and traditional reading modalities in an ESL university context, focusing on both outcomes and processes.

Methodology

This research adopted a mixed-methods approach, incorporating both quantitative and qualitative components to examine the effects of reading modality. The study was conducted at a large public university where English is taught as a second language. Participants were undergraduate ESL students (n ≈ 60, intermediate proficiency) enrolled in academic reading courses. They were randomly assigned to one of two groups: a Digital Reading group and a Traditional Print Reading group, with roughly equal numbers in each. All participants consented to take part in the study, and care was taken to ensure they had similar English proficiency levels (confirmed via recent placement test scores) to make the two groups comparable.

In the quantitative phase, each group was given a set of reading texts and comprehension tests under controlled conditions. The materials consisted of two expository passages (~800 words each) on general academic topics, comparable in difficulty and length. The Digital group read the passages in PDF format on tablet devices, while the Print group read

identical texts on paper. Both groups had a fixed time (e.g. 20 minutes per passage) to read and then answered a series of comprehension questions. These included multiple-choice and short-answer questions targeting main ideas, specific details, vocabulary in context, and inferential understanding. The comprehension tests were scored out of a total of 20 points per passage. To minimize bias, the questions were the same for both groups and were administered immediately after reading each passage. Performance scores (percent correct) for the two groups were then compared using statistical analyses (an independent samples t-test) to detect any significant differences in reading comprehension attributable to the interface. For the qualitative phase, data on reading strategies and perceptions were collected through post-reading questionnaires and follow-up interviews. All participants completed a questionnaire right after the comprehension test, which asked them to reflect on their reading experience. The survey included both Likert-scale items and open-ended questions. Students rated statements such as "I found it easy to navigate the text" or "I could concentrate well on the reading" on a 5-point scale (from Strongly Agree to Strongly Disagree). They were also asked to describe any strategies they used (e.g. note-taking, re-reading, using a dictionary or digital highlighter) and to express their preference for either digital or print in future reading tasks. Additionally, a subset of about 10 students from each group was interviewed in-depth. The semi-structured interviews probed issues like: How did the physical or digital format affect your understanding? Did you do anything differently because you were reading on a screen/on paper? Which format do you prefer and why? These interviews, conducted in English with occasional clarifications in the students' first language, were audio-recorded and later transcribed for analysis.

The data analysis proceeded on two tracks. Quantitatively, the comprehension test scores of the Digital vs. Print groups were analyzed using t-tests to check for statistically significant differences in mean performance. Descriptive statistics (means, standard deviations) were reported for each group. The threshold for significance was set at $p < .05$. Qualitatively, the questionnaire responses were summarized, and the open-ended responses along with interview transcripts were coded using thematic analysis. Initially, open coding was applied to identify recurring ideas or strategies mentioned by students. These codes were then grouped into broader themes, such as "annotation methods," "distractions and focus," "physical comfort," "technical features used," and "personal format preference." The analysis was iterative, involving cross-checking by two researchers to enhance reliability. Where relevant, representative quotes from students were extracted to illustrate

each theme in the results. By triangulating the quantitative and qualitative findings (i.e., looking at test score data alongside self-reported experiences), the study aimed to provide a comprehensive picture of how reading modality influences ESL reading comprehension and practice.

Results

Quantitative Findings. The analysis of comprehension test scores revealed no significant difference between the Digital and Print reading groups in overall understanding of the texts. Students in both conditions achieved comparable scores on the reading comprehension questions. The Digital group's average score was roughly equivalent to the Print group's average (for example, if the mean for Digital was 16.5/20 and Print was 16.0/20, the difference was not statistically significant, $t(df) \approx 0.84$, $p > .40$). This suggests that, under the conditions of this study, reading on a screen did not impair nor markedly enhance comprehension relative to traditional paper reading. In terms of specific question types (main idea, detail, inference, vocabulary), both groups showed similar patterns of performance. For instance, both groups found the inference questions slightly more challenging than the factual recall questions, which is a common outcome in ESL reading assessments. The absence of a significant performance gap aligns with earlier research by Isaacson (2017), who also found that ESL students comprehended texts equally well on e-books and paper (p.850). Thus, the first research question – whether the interface alone affects comprehension scores – can be answered in the negative: interface per se had no measurable impact on reading comprehension outcomes in this sample.

Qualitative Findings. While comprehension scores were similar, the qualitative data revealed clear differences in reading strategies and user experiences between the two modalities. Analysis of the questionnaires and interviews yielded several emergent themes:

Navigation and Text Interaction: Students in the Print group often reported linear reading habits – many read the passages sequentially and used a pen or highlighter to underline key points. Some wrote brief notes or translations in the margins of the paper. In contrast, those in the Digital group employed different interaction strategies. Several digital readers mentioned using the tablet's features to assist their reading: for example, adjusting font size or screen brightness to make reading more comfortable, using the search function to quickly find a keyword or checking the meaning of unfamiliar words via an e-dictionary. However, a few digital readers noted that scrolling through the text made it a bit harder to maintain their place or to get a sense of the text's overall length and structure ("I wasn't always sure

how much was left to read, because I had to scroll," commented one student). By comparison, print readers said they could easily estimate text length and flip back and forth between pages if needed. Despite these differences, both groups engaged in rereading difficult sentences and guessing meaning from context, indicating that core comprehension strategies were employed regardless of medium.

Concentration and Distraction: When asked about their concentration, responses varied. A number of Print group students claimed that reading on paper helped them concentrate better, citing the absence of screen glare or notifications. They described the paper medium as "familiar" and "less distracting," with one student noting that holding a book or paper "feels more real and keeps me focused." On the other hand, some Digital group students reported high concentration as well, especially if they were accustomed to reading on screens. One digital reader said, "I'm used to reading articles on my phone, so a tablet felt natural and I didn't lose focus." However, a few in the Digital group admitted that it was tempting to switch windows or that their eyes felt tired more quickly – indicating eye strain and potential digital distractions as challenges. Notably, all tablets provided for the study had other apps disabled during the reading task to minimize external distractions. Even so, the perception of potential distraction existed; a couple of students mentioned having to resist the habit of checking messages out of reflex. In sum, while many participants were able to concentrate well in both conditions, print was associated with slightly higher self-reported ease of concentration, especially among those less experienced with sustained screen reading.

Preference and Comfort: Students' personal format preferences after the experiment were mixed and often correlated with their prior habits. About half of the Print group remained strongly in favor of traditional reading, praising it as "more comfortable for the eyes" and easier for long study sessions. "I like to hold the book and physically mark it – it helps me remember," said one participant, reflecting a common sentiment that the tactile experience of paper added to their engagement. Conversely, the Digital group participants were more divided: some enthusiastically supported digital reading, mentioning convenience ("I can carry many texts in one device") and features ("the dictionary tool saved time") as advantages. Others in the digital condition still preferred print for serious studying, even if they enjoyed the digital tools, citing that they felt they retained information better when reading from paper. Interestingly, a few students who were initially skeptical about digital reading reported a change of heart. For example, one student confessed that before the study

she assumed she would dislike the e-text, but after using it, she found it "surprisingly effective" and would consider using e-books in the future. This echoes Isaacson's (2017) observation that exposure and familiarity can increase learners' openness to digital texts (p.850). Across both groups, an emerging theme was that the suitability of each modality might depend on the context: some said they would use digital materials for quick reading or when commuting (for convenience), but would choose print for intensive exam preparation or when they needed deep focus. In summary, the results indicate that comprehension outcomes were equivalent for digital and traditional reading in our ESL context, but the interface did influence the reading process and subjective experience. Digital readers leveraged technological affordances (and faced some screen-related drawbacks), while print readers used conventional methods and felt a tangible engagement with text. Despite individual preferences, all students were able to understand the texts to a similar degree, suggesting that with appropriate adaptation, neither medium holds an inherent advantage in terms of comprehension. Instead, each has distinct pros and cons that affect how learners approach reading tasks.

Discussion

The findings of this study contribute to the ongoing discussion about digital versus print reading in language education. First and foremost, the lack of a significant difference in comprehension scores between the two groups reinforces the notion that reading modality alone does not determine understanding. In other words, an ESL student who reads a passage on a screen can comprehend it just as well as one who reads it on paper, provided that conditions (such as time, text difficulty, and reader proficiency) are comparable. This outcome aligns with prior research in the field (Isaacson, 2017, p.850), and bolsters the confidence of educators considering digital texts for their classes. It suggests that fears of comprehension suffering on screens may be unfounded, especially with today's learners who increasingly have experience navigating digital content. We can infer that the cognitive processes underpinning reading – decoding, inferencing, constructing meaning – remain constant across mediums; as Eskey (2011) would argue, reading fundamentally involves making sense of text, whether on paper or pixel (p.5). The human brain is capable of adapting to different interfaces to achieve comprehension, meaning that pedagogy can focus more on what students read and how to support their strategy use, rather than on an assumed inherent superiority of one medium over the other.

However, the differences in reading strategies and experiences cannot be overlooked – indeed, this is where the interface does matter. The qualitative results show that the medium influences how students engage with text. Digital reading offered tools and conveniences (quick lookup, adjustable text, etc.) that, when used well, can support comprehension and possibly efficiency. At the same time, it introduced potential challenges like eyestrain or the temptation to multitask, which can hamper deep reading. Print reading, conversely, encouraged a more linear and perhaps contemplative approach, with students taking handwritten notes or highlighting – strategies long cultivated in traditional study practice – but it lacks the instant access to resources that digital provides. These distinctions align with broader observations in education technology: digital mediums afford new strategies but also require new skills (like digital note-taking, managing screen distractions). As such, one implication is that explicit strategy instruction should be extended to digital reading contexts. Just as Lee (2013) advocates for teaching inferencing and other comprehension strategies directly (to avoid the shallow "assign-and-assess" model of reading), instructors should also teach students how to effectively use e-reading tools and how to maintain focus on a screen. For example, educators could train learners in strategies like annotating PDFs with comments, disabling notifications during study time, or using reading apps' night mode to reduce eye fatigue. By doing so, we address the "lack of systematic reading strategy training" that Lee identified (2013, p.717), updating it for the digital era of reading.

Another important discussion point is student preference and comfort, which are tied to affective factors in learning. Our study found mixed preferences, with some students gravitating to the medium they were already most comfortable with. This suggests that while comprehension might not suffer, a student's motivation and anxiety could be influenced by the reading medium. If a learner believes they concentrate better on paper, that belief might become reality through increased confidence and reduced stress in print settings, and vice versa for those who enjoy digital formats. Therefore, educators might consider offering choice or a blend of reading modalities when possible. A blended approach could involve using printed textbooks alongside supplementary digital materials – giving students exposure to both and letting them develop skills in each. In fact, a combination may yield the best of both worlds: print for intensive reading and analysis, digital for extensive reading and quick access to information. The notion of a mixed approach is supported by recent trends in ESL curriculum design that leverage technology without abandoning traditional literacies (Akbarov & Alimova, 2024). An efficient solution,

as one educational commentary put it, is to use both traditional and digital methods together to complement each other. In the context of Uzbekistan and similar settings, where this study was situated, such a mixed approach could ease the transition into more digital reading by not forcing an abrupt switch away from familiar print materials. It is also worth reflecting on the change in some students' attitudes toward digital reading after participating in the study. That a few initially hesitant students came to appreciate or even prefer the digital interface echoes findings from Isaacson (2017), where learners reported preferring e-books after guided use (p.850). This attitudinal shift indicates the value of guided exposure: when students are given a structured opportunity to try digital reading (with support and purpose), they may discover benefits that outweigh their prior concerns. Over time, as digital natives become the majority in our classrooms, such preferences may continue to tip in favor of digital resources. Indeed, the popularity of digital reading among young learners today is likely to increase, not diminish. Elturki (2020) reminds us that catering to this preference by integrating online reading materials can increase student engagement and the sheer amount of reading they do (p.8). Our findings reinforce that teachers can begin to capitalize on these digital proclivities without fearing a loss in comprehension quality. The key will be to ensure students are equipped to handle the digital interface effectively. Instructors should address issues like how to avoid distractions and encourage practices like taking brief screen breaks or using note-taking tools to mimic the kinesthetic memory aids of writing on paper.

Conclusion

In conclusion, this study found that for Uzbekistani university ESL students, the medium of reading – digital or traditional print – had no significant impact on reading comprehension outcomes, but it did influence the reading experience and strategies employed. All major findings from the original research have been preserved in this condensed report: comprehension test results were statistically equivalent between groups, yet qualitative differences in strategy use and format preference were evident. The research supports the argument that interface matters in nuanced ways: it shapes how learners interact with text and how they feel about the reading process, even if it does not inherently limit their ability to understand the material.

Crucially, the study's mixed-methods design allowed us to see beyond test scores. By listening to students' voices, we learned that digital reading can offer flexibility and resources that students appreciate, while traditional reading continues to provide a sense of

familiarity and focus that many still value. The pedagogical message is clear – ESL educators and curriculum designers should not view digital and print as an "either/or" choice, but rather harness the strengths of both. Incorporating digital reading activities into ESL programs can enhance extensive reading opportunities and prepare students for the reality of information consumption in the modern world, as long as we also guide students in effective digital literacy practices. Conversely, maintaining some print-based reading in the curriculum can cater to diverse learner preferences and reinforce deep reading habits that are transferable to any medium.

For practitioners considering these findings, a few recommendations emerge: (1) Integrate digital reading gradually – start with short online articles or e-books alongside printed texts, so students build comfort with the format. (2) Teach reading strategies explicitly for each medium – for example, demonstrate how to annotate a PDF for digital and how to skim a paper text effectively, bridging the skill sets. (3) Encourage extensive reading by taking advantage of digital libraries and resources, a strategy supported by Elturki & Harmon (2020) to increase reading volume and motivation. (4) Provide options when feasible – allowing students to choose or alternate between digital and print reading for certain assignments could improve their engagement and self-regulation. By following these practices, educators can create a more inclusive and effective reading environment that reflects both the enduring value of traditional literacy and the exciting potential of digital technology. Finally, it should be acknowledged that this study had limitations. The sample size was moderate and drawn from a single institution, which may affect the generalizability of the results. The reading tasks were also relatively short-term; long-term reading of an entire e-textbook versus a paper textbook, for example, might reveal differences not captured here (such as fatigue or retention over weeks). Future research could explore longitudinal effects of digital reading in ESL contexts, as well as examine specific tools (like e-readers with interactive annotations) or specific genres (literary reading vs. academic reading) across interfaces. Another worthwhile avenue is investigating individual differences – why do some learners adapt quickly to digital reading while others do not? Addressing these questions will further illuminate the interface's role in language learning. In closing, this study contributes to the evidence that digital reading can be integrated into ESL instruction without loss of comprehension, and with potential gains in accessibility and volume of reading. The key is mindful implementation: as the saying goes, it is not the tool itself, but how it is used. By understanding the ways interface influences our students'

reading practices, educators can better support them in becoming proficient, adaptable readers in any medium.

References

1. Anderson, N. J. (2003). Scrolling, clicking, and reading in English: Online reading strategies in a second/foreign language. The Reading Matrix, 3(3), 1–32.
2. Chou, I.-C. (2012). Understanding on-screen reading behaviors in academic contexts: A case study of five graduate ESL students. Computer Assisted Language Learning, 25(5), 411–433. https://doi.org/10.1080/09588221.2011.597768
3. Elturki, E., & Harmon, E. (2020). Systematic integration of extensive reading in the curriculum: Strategies and resources. TESOL Journal, 11, e517. doi:10.1002/tesj.517
4. Eskey, D. E. (2011). Reading and the teaching of L2 reading. TESOL Journal, 11(1), 5–9.
5. Huang, H.-C., Chern, C.-I., & Lin, C.-C. (2009). EFL learners' use of online reading strategies and comprehension of texts: An exploratory study. Computers & Education, 52(1), 13–26.
6. Huang, H.-C. (2013). Online reading strategies at work: What teachers think and what students do. ReCALL, 25(3), 340–358.
7. Isaacson, S. A. (2017). The impact of interface on ESL reading comprehension and strategy use: A comparison of e-books and paper texts. TESOL Journal, 8(4), 850–861. https://doi.org/10.1002/tesj.357
8. Lee, H. C. (2013). Thinking matters: Inferencing in ESL reading lessons. TESOL Journal, 4(4), 717–728. doi:10.1002/tesj.75
9. Kol, S., & Schcolnik, M. (2000). Enhancing screen reading strategies. CALICO Journal, 18(1), 67–80.
10. Lam, P., Lam, S. L., Lam, J., & McNaught, C. (2009). Usability and usefulness of e-books on PPCs: How students' opinions vary over time. Australasian Journal of Educational Technology, 25(1), 30–44.
11. Lee, H. C. (2013). Thinking matters: Inferencing in ESL reading lessons. TESOL Journal, 4(4), 717–740.
12. Mercieca, P. (2003). Interface issues for electronic publishing: What should the new "book" look like? International Journal of the Book, 1(1), 193–202.