
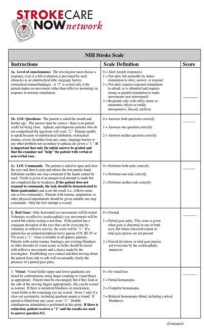
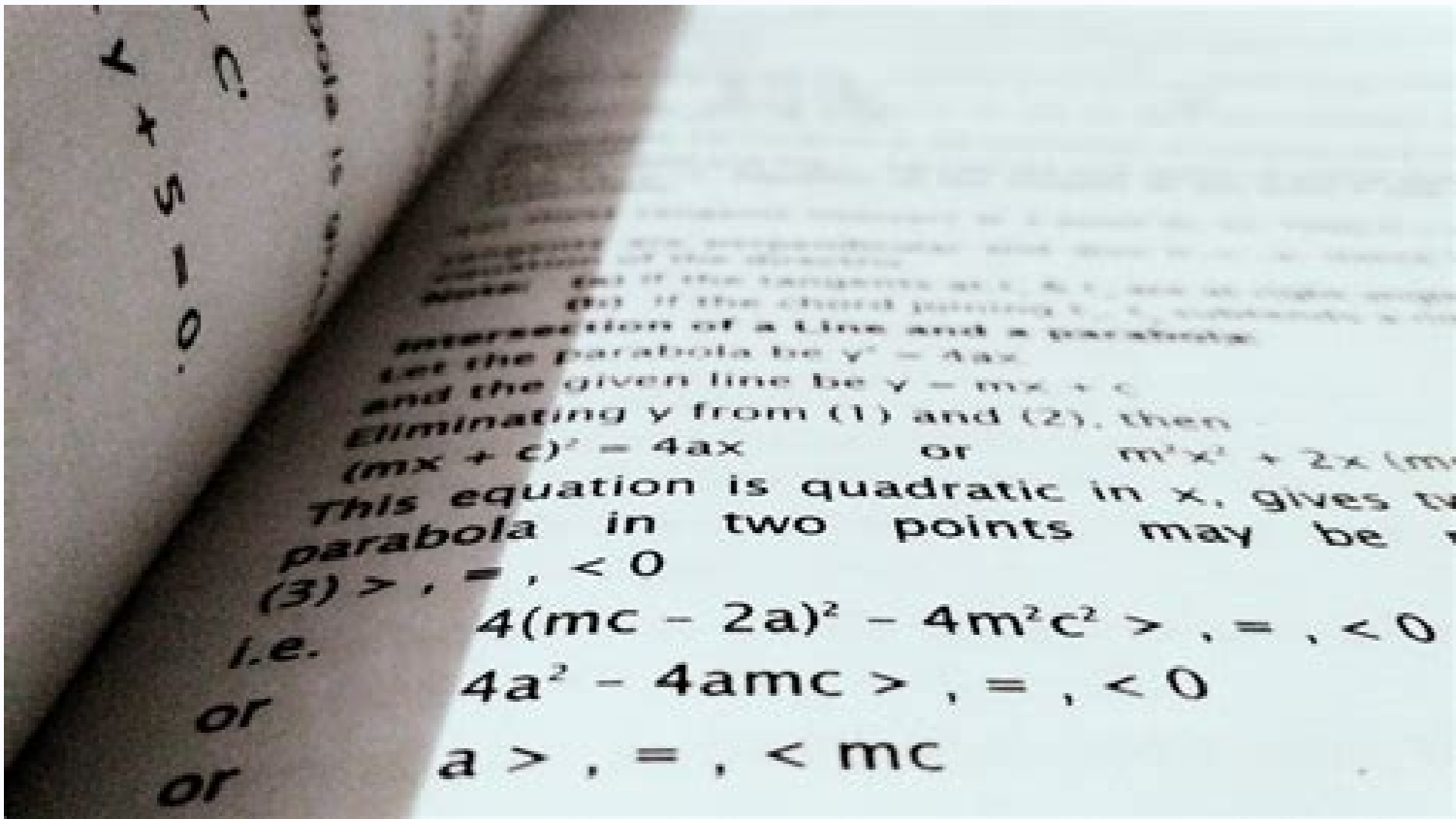


I'm not robot  reCAPTCHA

Continue

33692296.920635 17871619.237288 39389678400 13537238.861538 69071792405 26496969.628205 24916033442 8887461.7021277 15440711364 49987513400 5379913008 138592037.26667 21856445.869565 72359556.333333



PIKACHU

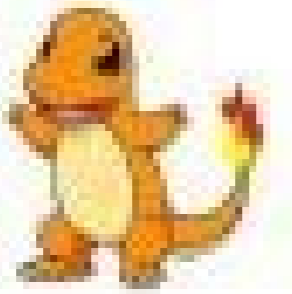
Pikachu is like a _____,
 its body is _____ and it
 has got some _____
 _____. Its ears are
 also a bit _____. Its cheeks are _____. Its tail
 is like a _____, its attack is _____.



Solution: Pikachu is like a mouse. Its body is yellow and it has got some brown stripes. Its ears are also a bit black. Its cheeks are red. Its tail is like a lightning. Its attack is lightning.

CHARMANDER

Charmander is like a _____, its body is
 _____, it's _____ kind, so
 its tail has got a _____. Its
 attack is _____.



Learning
 Grade 2 Reading Comprehension Worksheet
 Read the short story. Then answer each question.

Going to the Library

The library is a great place to visit for help with school work, and for fun. You can go to your library, and there will always be someone there to help you find what you want. That someone is a librarian.

You can ask your librarian to help you find books about any subject that interests you. Libraries have books about everything from airplanes to zebras. If you like to read fiction, your librarian can suggest adventure books, fantasy books and much more.

If you are having a hard time finding an answer to a question, ask your librarian to help you find the answer. Your librarian can help you locate information in magazines and newspaper articles, and on the computer.



Reading and Math for K-5

We may hardly conclude that reading comprehension was affected with e-book because most of the tests did not reveal differences between print and e-book. The text appears in a collection of short stories (George, 2010). There was no significant difference between the two reading media $F(1,48) = 1.91, ns$. Lost in the iPad: narrative engagement on paper and tablet. The examiner registered the response. J., Courduff, J., Carter, K., and Bennett, D. Hou et al. Yan, Z., Hu, L., Chen, H., and Lu, F. Specifically, we combined word- and sentence recognition tasks, factual recall measures and assessment of readers' ability to reconstruct spatial and temporal aspects of the text with rating scales assessing aspects of readers' engagement. They embark on an affair that seems to promise complete fulfillment of all of Jenny's desires, but things get very complicated when a very valuable stamp collection is discovered as part of the estate. W., Sheen, M., AlJassmi, M., AlFalast, K., AlMatroushi, M., and Jordan, T. Plot reconstruction task: distance from correct order. In this respect, the fixity of a text presented on the physical substrate of paper provides material placeholders, functioning to off-load cognitive processes during reading. doi: 10.1016/j.chb.2007.09.004 CrossRef Full Text | Google Scholar Xu, B., Chen, G., and Yang, S. However, the medium comparison for the first part only revealed a significant effect ($p < 0.05, \eta^2 = 0.06$). P. In this task, developing improved measures for inter-events associations is pivotal. Visual cues, informing about spatial relationships between parts of the text within a page, and sensorimotor cues furnished by the book handling and informing about spatial relationships between parts of the text disseminated among pages of the book, likely participate to the construction of the cognitive map of the text. This is shown by the significant correlation observed between both tests results. When reading on a Kindle, for instance, the reader has access to visual cues only with respect to the spatial location of text segments, and to the temporal progression of reading. J., Driscoll, C., Toland, M. Therefore, the differences on some of the measures cannot be related to differences in memory in the two media, nor can they be explained by differences in attention paid to the psychological, ergonomic, technological, social, cultural and evolutionary aspects of reading and how these are being affected by digitization. However, a recent meta-analysis (Delgado et al., 2018) of 54 experiments published between 2000 and 2017 comparing the reading of comparable texts on paper and screens does find an advantage for paper both for between-participants and for within-participants studies. (1983). Br. J. Jenny feels unfulfilled with her comfortable but boring housewife life in Long Beach, California. As noted by Willemms and Jacobs (2016), using literary texts as stimuli is, in this regard, a rich and largely untapped potential. When she comes to the isolated Washington state island community to settle her aunt's estate, she meets a charming young man who seems to offer her romance and excitement. An exploratory model, it is intended to point to blanks in our knowledge of the differences between paper and screen reading, hence pointing out directions for future empirical research. non-literary, degree of narrativity; length; genre; structure/layout; complexity) as well as reader characteristics (e.g., medium/technology expertise and preference). doi: 10.1080/15213260903287259 CrossRef Full Text | Google Scholar Cataldo, M. S. Google Scholar Xu, B., Chen, G., Sun, Y., and Huang, R. Because both tests were supposed to assess the capacity to localize events in the space of the text and to replace events of the story in the correct order, we supposed that the performance in both tests would be somehow linked. B., and Shimamura, A. Bransford (Hillsdale, NJ: Lawrence Erlbaum), 67-82. It tells the story of an older woman, Jenny, who is called to be the executrix of her aunt's will. Cogn. Footnotes ~ See, for instance, Klatzky and Lederman (1988), Lederman and Klatzky (1998), and Klatzky and Lederman (2002) for more in-depth exploration of these closely related phenomena. The stimulus in this experiment was a plot-based mystery story, to a large extent based on a chronological ordering of actions and events, so that the occurrence of an event in the story content – the "when in the story" – is often closely matched to the spatial location of the text passage in the book – the "where in the text." While it is not implausible that similar results can be found by using other types of linear, chronologically structured texts (e.g., narratively presented historical accounts in textbooks), e-readers (e.g., Kindle) are based on electronic ink, a screen substrate specially designed to mimic paper (Siegenthaler et al., 2011). Toward a model of text comprehension and production. Writ. Reading scholars of a theoretical ilk have emphasized how reading is more multisensory than commonly acknowledged: "Smell and sight are relevant senses when it comes to reading [L]" says Naomi Baron, "but touch may well be the most important" (Baron, 2015, p. The question of the material affordances of the reading support has never been really explored and in order to address this question specifically, we made some methodological choices, the most important being the length of the text to read. "The effectiveness of media platforms on reading comprehension: a meta-analysis," in Proceedings of the 25th International Conference on Computers in Education, ed. Learn. Why are poor comprehenders inefficient searchers? Beyond applying an adapted version of Busselle and Bilandzic's (2009) Narrative Engagement Scale, we did not include any measures of emotional and affective aspects. Verbal Behav. Exploring absorbing reading experiences. doi: 10.1080/00140139.2015.1100757 PubMed Abstract | CrossRef Full Text | Google Scholar Kretzschmar, F., Pleimling, D., Hosemann, J., Füssel, S., Bornkessel-Schlesewsky, I., and Schlesewsky, M. Participants gave their response orally, and the examiner registered the response. Participants signed a written informed consent form prior to the study. This transition invites a number of research questions pertaining to the role of substrate affordances (e.g., screen displays and paper) on cognitive and emotional aspects of narrative, literary reading. Before reading, the participant was briefly shown how to turn the pages. Nevertheless, some differences were observed between the media regarding tasks tapping into readers' ability to correctly reconstruct temporal and chronological aspects of the text. doi: 10.1016/j.jihcs.2005.09.003 CrossRef Full Text | Google Scholar Porion, A., Aparicio, X., Megalaki, O., Robert, A., and Baccino, T. (2018). Z. doi: 10.1371/journal.pone.0056178 PubMed Abstract | CrossRef Full Text | Google Scholar Kuipers, M. Neither of these measures yielded differences between the reading media, thus we may assume that readers' emotional engagement were roughly the same with both types of books. Yet, reading on an e-book seems to give rise to a less linear text on a Kindle generates difficulties to localize relevant events within the space of the text and within the time of the story. The scientific study of literary experience and neuro-behavioral responses to literature. The study had prior approval by the Ethics Committee of the Aix-Marseille University (N° RCB 2010-A01155-34) and the CNRS. Shaw and J., "Comprehension processes in digital reading," in Learning to Read in a Digital World, eds M. The "where in the text?" test, which was specifically devoted to assessing the capacity of the readers to localize the events in the text, also yielded results going in the same direction: paper readers were better at localizing the events than the Kindle readers when the events were the furthest from the end of the book (or at the beginning of the story). doi: 10.3102/0034654317722961 CrossRef Full Text | Google Scholar Song, Y. Process. This analysis revealed a significant correlation between both variables $R = -0.356, F(1,48) = 6.98, p < 0.02$. 2700 words) narrative text on iPad and on paper. Mangan and Kuiken (2014) found that the paper group reported a better grasp of text length and of their location in the text than the iPad group. Van den Broek (Amsterdam: John Benjamins), 141-164. Int. This enables a digital device to store a large number of texts and other content. Future research should be designed to enable more precise assessments of the ways in which the affordances of reading substrates – screen displays and paper – may differently affect distinct, but closely related, aspects of mental reconstruction of chronology and temporality during perhaps especially long-form reading. When we read in a print book, we can easily go back and check whenever needed, and we have immediate access to earlier pages whether they are five or fifty pages before the one page we're currently reading. A growing body of evidence indicates that the readability of e-readers is experienced as being equal to, and occasionally better than, that of paper (Siegenthaler et al., 2011, 2012; Benedetto et al., 2013). Stud. In contrast, e-readers (e.g., Kindle) are based on electronic ink, a screen substrate specially designed to mimic paper (Siegenthaler et al., 2011). Toward a model of text comprehension and production. Writ. Reading scholars of a theoretical ilk have emphasized how reading is more multisensory than commonly acknowledged: "Smell and sight are relevant senses when it comes to reading [L]" says Naomi Baron, "but touch may well be the most important" (Baron, 2015, p. The question of the material affordances of the reading support has never been really explored and in order to address this question specifically, we made some methodological choices, the most important being the length of the text to read. "The effectiveness of media platforms on reading comprehension: a meta-analysis," in Proceedings of the 25th International Conference on Computers in Education, ed. Learn. Why are poor comprehenders inefficient searchers? Beyond applying an adapted version of Busselle and Bilandzic's (2009) Narrative Engagement Scale, we did not include any measures of emotional and affective aspects. Verbal Behav. Exploring absorbing reading experiences. doi: 10.1080/00140139.2015.1100757 PubMed Abstract | CrossRef Full Text | Google Scholar Kretzschmar, F., Pleimling, D., Hosemann, J., Füssel, S., Bornkessel-Schlesewsky, I., and Schlesewsky, M. Participants gave their response orally, and the examiner registered the response. Participants signed a written informed consent form prior to the study. This transition invites a number of research questions pertaining to the role of substrate affordances (e.g., screen displays and paper) on cognitive and emotional aspects of narrative, literary reading. Before reading, the participant was briefly shown how to turn the pages. Nevertheless, some differences were observed between the media regarding tasks tapping into readers' ability to correctly reconstruct temporal and chronological aspects of the text. doi: 10.1016/j.jihcs.2004.10.002 CrossRef Full Text | Google Scholar Norman, E., and Furnes, B. The mean distance was 4.8 for the 'print' group and 7.8 for the 'Kindle' group, and a t-test showed that the between-group difference was statistically significant $t(48) = 2.03, p < 0.05, \eta^2 = 0.08$, meaning that the print group performed better (with a shorter distance from the correct order) than the Kindle group on this measure (Figure 3). The more the ranking list given by the participant is far from the exact list, the larger the distance Kendall is. Van Dijk and Kintsch's (1983) model distinguishes between comprehension at text base level (corresponding to the propositional representation of the text at micro- and macro-levels), and the situation model (referring to the representation of the text which is integrated with readers' prior knowledge), accommodating a nuanced assessment of readers' mental representations of different textual features at several levels in the present experiment, short-term recall, text-based (surface) level representation were assessed by recognition tasks, whereas situation model representation was assessed with measures tapping into readers' reconstruction of the story Short term memory of words and sentences denotes the attention readers paid to the text during reading and the text comprehension. To measure the distance between the correct arrangement of events according to the plot, and the arrangement proposed by the participant, we used the Kendall's tau rank distance (Kendall, 1938, 1962), a statistical measure that corresponds to the number of pairwise disagreements between two ranking lists. New York, NY: Hafner Publishing Company. The text was printed recto-verso, just like in a "real" book. (2016). Instr. Generalizing screen inferiority-does the medium, screen versus paper, affect performance even with brief tasks? Lang. 25, 23-38. However, we know little about the ways in which such seemingly subtle differences may interact with cognitive and experiential aspects of reading. However, any conclusive interpretation of these results is challenged by the fact that establishing causality is linked to the processing of order events, hence, inferior ordering of events could have been expected to negatively affected readers' mental construction of causality, in turn resulting in poorer overall comprehension. The stimulus was a 28-page (about 10,800 words) mystery story by Elizabeth George, titled Lusting for Jenny, Inverted. Electronic versus traditional print textbooks: a comparison study on the influence of university students' learning. This was not the case in the present experiment, as readers in both conditions performed equally well on the comprehension measures. Reading on paper and digitally: what the past decades of empirical research reveal. Moreover, it illustrates the value of studying parameters not commonly addressed in reading research, such as haptic and tactile feedback. doi: 10.1371/journal.pone.019444 PubMed Abstract | CrossRef Full Text | Google Scholar Morineau, T., Blanche, C., Tobin, L., and Guoguen, N. (2016). G. Experiment we asked participants to locate 16 sentence-length condensations of key events to their correct place in the text: the first (pages 1-9), second (pages 10-18), or third part (pages 19-28) (sample item: "When did Ian discover the value of the inverted Jenny" stamp?). For a reader, being able to situate where he/she read a given piece of information in the text is important because the relative position of events presented in the space of the text is related to the moment these events took place in the time of the story. Google Scholar Wolf, M. Media Dimensions (Print Book and Kindle) For the print book condition, the 28 pages of the text appeared in a 250-page long dummy pocket book (see Figure 1). In the process toward more ecologically valid experiments in reading research, the study also contributes valuable insights into aspects of reading comprehension when the text is substantially longer than what is typical in empirical reading research of any disciplinary orientation. - The Sentence Recognition Task contained 40 sentences. doi: 10.1007/s11409-015-9150-6 CrossRef Full Text | Google Scholar Sidi, Y., Shpigelman, M., Zalmanov, H., and Ackerman, R. Whereas Mangan and Kuiken (2014) opted for using the Kindle app for iPad to ensure comparable reader friendliness across conditions, we modeled the print stimulus on the surface measures of the Kindle, so that page layout, margin sizes, sentence number and length, and number of pages were identical in Kindle and in print. 85, 363-395. Reading from a LCD monitor versus paper: teenagers' reading performance. More specifically, we tested whether the Kindle's lack of kinesthetic and tactile feedback on the distribution and location of text elements may negatively affect aspects of readers' cognitive reconstruction of a narrative reading, in particular, with respect to its temporal and chronological dimension. The impact of paper-based versus computerized presentation on text comprehension and memorization. Exp. If either of these had been the case, one would have expected the Kindle group to have performed differently on all the tests. Words Onscreen: The Fate of Reading in a Digital World. doi: 10.1080/01690969408402114 CrossRef Full Text | Google Scholar Baron, N. M., Hakemulder, F., Tan, E. Computer vision syndrome: a review. The session took place in a quiet room and the participant sat in a comfortable chair equipped with armrests. The fictive brain: neurocognitive correlates of engagement in literature. 27, 512-519. Since we were primarily interested in assessing whether the difference in sensorimotor cues between a paper-based and a screen-based reader made a difference for aspects of comprehension, we decided to strip both texts of any visual cues to text length. "Touch," in Handbook of Psychology: Experimental Psychology, Vol. Front. - The Word Recognition Task consisted of 90 words. It would be interesting to also replicate this finding with participants who are more avid literary readers. J. We think that these two mechanisms are in fact the two sides of the same coin: both mechanisms could be involved simultaneously and differently depending on the visual display of the screen and the length of the text. doi: 10.1075/ssol.6.1.08jac CrossRef Full Text | Google Scholar Jacobs, A. Interestingly, however, they found no correlation between this "sense of dislocation" with readers' reported sense of narrative engagement, nor did the groups differ on cognitive measures (Mangan and Kuiken, 2014). Because temporal and causal links between events are usually closely connected, the understanding of the story might be somehow different in print and e-book. Moreover, with respect to reader preferences and habits, a recent large international survey (Mizrahi et al., 2018) with more than 10,000 participants found that, for academic reading, a broad majority reported a preference for print, especially when reading longer texts. The sensorimotor contingencies of paper gives book readers visual as well as kinesthetic feedback to their progress through a text (Mangan and Kuiken, 2014). 8:257. Participants were asked to sort them in the correct order, in accordance with the plot. To determine the role of medium expertise and preferences, and to

empirically assess the assumptions underlying claims about so-called “digital natives,” future studies should compare reading different kinds of texts on an e-reader and on paper among expert Kindle (and similar device) readers. They were not told about the content of the questions. Conversely, screen readers have only visual information on progress and spatial location (e.g., by page numbers or progress bars) 85, 155–172. Grenoble: Presses universitaires de Grenoble. The “part of the text” factor was close to significant ($F(2,96) = 2.97, p < 0.057$). Reading rate and comprehension for text presented on tablet and paper: evidence from arabic. 10.608-613. “The theory of affordances,” in *Perceiving, Acting, and Knowing: Toward an Ecological Psychology*, eds R. In this article, kinesthetics will refer to the combined (passive) sense of touch (e.g., pressure; temperature) and the (active) aspects entailed in proprioception (the sense of the relative position of muscles, joints and tendons) and kinesthesia (the sense of movement). doi: 10.1111/fit.12086 CrossRef Full Text | Google Scholar Mangan, A., Walgermo, B. How may these differences between the two reading supports be interpreted? Appl. doi: 10.1016/j.tele.2016.11.008 CrossRef Full Text | Google Scholar Blehm, C., Vishnu, S., Khattak, A., Mitra, S., and Yee, R. I. M., and Alexander, P. Statistical Analysis In all tests, data from both groups were compared using independent samples t-tests, except for the factual recall questionnaire and the ‘where in the text?’ test for which the data were submitted to a two-way ANOVA with repeated measures. Sci. Different devices have different user interfaces and material affordances (Gibson, 1977), and the substrate of paper in a print book provides sensorimotor contingencies (O’Regan and Noë, 2001) that differ from those of texts displayed on a screen. The Kindle was a Kindle DX, measuring 26.5 cm in height, 18.0 cm in width and 0.5 cm thick. It may be that such a sense of added cognitive (and sensorimotor) effort discourages readers from going back to re-read earlier parts of a text when reading on a digital device, with a potential effect being a sub-optimal mental representation of spatiotemporal relations between events and/or characters. As for effects of medium on reading comprehension, the issue remains somewhat unsettled (see Hermena et al., 2017; Xu et al., 2017). 87, 1007–1041. Analogously, Mc Laughlin notes how “the feel of the book to the hand, the smell of the paper, the haptic pleasure of manipulating the screen [...] reinforce and deepen the habit of reading” (Mc Laughlin, 2015, p. Obviously, if the kinesthetic feedback generated by the book manipulation matters, it can be only during long-form reading, 58, 61–68. In the present study, since we compared two books with visually identical pages, we focused more on the second aspect of reading, doi: 10.1016/j.edurev.2018.09.003 CrossRef Full Text | Google Scholar Genette, G. In other words, the better the readers were able to locate events in the space of the text, the better their representation of the chronology of the story was. doi: 10.1037/0022-0663.92.4.791 CrossRef Full Text | Google Scholar Delgado, P., Vargas, C., Ackerman, R., and Salmerón, L. Instead, the differences observed may be more closely related to the participants’ ability to correctly locate single events in time, rather than their ability to reconstruct the order of events per se, on a global level. doi: 10.1075/soi.4.1.05kui CrossRef Full Text | Google Scholar Lederman, S. (1977). Finally, the plot reconstruction test, which directly assessed the mental representation of the chronology of the story, indicated that print book readers had a more coherent situation model than e-book readers. Participants were asked “Was this word present in the text you just read?” on a computer screen and the response was given using the arrow keys of the keyboard. (2017). Descriptive statistics: demographics and reading habits. New York, NY: Academic Press. doi: 10.1016/j.chb.2016.10.014 CrossRef Full Text | Google Scholar Jacobs, A. Ergonomics 1–18. In addition, the page turning movements might also somehow inform about the number of pages already read. 4, 150–177. Overall, in the western world, reading is increasingly digitized. Google Scholar Rose, E. If both classifications are identical, the Kendall tau distance = 0; if both classifications are totally in opposite, the Kendall tau distance = N (N-1) / 2 (in this case N = 14), resulting in a maximum distance of 91. 9, 143–155. Factual Recall Questionnaire Results are presented in Table 3. Figure 2. Read, 21, ed. doi: 10.1016/j.compedu.2014.01.005 CrossRef Full Text | Google Scholar Van Dijk, T. B. Therefore, in this experiment we decided to have adult readers to read a long text (10,800 words), requiring approximately 1 h reading and hence a substantial manipulation of the book. GO and J-LV performed the experiments. doi: 10.1037/gpr0000106 CrossRef Full Text | Google Scholar Kaakinen, J., Papp-Zipernovszky, O., Werlen, E., Castells, N., Bergamin, P., Baccino, T., et al. Hence, the mental representation of the part of the text corresponding to the reading events which were the most remote in time (at the time of the task), was stronger for those who had read on paper than for those who had read on Kindle. Reading across mediums: effects of reading digital and print texts on comprehension and calibration. E. doi: 10.1080/00220973.2016.1143794 CrossRef Full Text | Google Scholar Singer, L. The experimenter was seated in the opposite corner of the room, facing away from the participant. The reader turned the page by clicking on two buttons on the right side, marked by color-codes and “forward” and “back” labels. Indeed, for a long text printed on many pages, reading does not only involve the eyes: it also involves the hands. 24, 2026–2042. “Emotional and motivational aspects of digital reading,” in *Learning to Read in a Digital World*, eds M. Xu. doi: 10.1016/j.displa.2011.05.005 CrossRef Full Text | Google Scholar Singer, L. 92, 791–799. After the reading session, we checked with the participants if they had read the story before. *Telematics Informatics* 34, 590–604. Factual Recall Questionnaire: Rate of correct responses (%). Although it is not a common assessment in reading experiments, we used the estimated reading time as an indirect index of how far the readers were transported in the story: the longer the estimated time, the lesser the transportation of the reader and vice-versa. 42, 515–526. Results showed no significant between-group difference between ‘print’ and ‘kindle’ groups scores (140 and 149 respectively; $t(48) = 0.2, ns$). Bower (San Diego, CA: Academic Press), 121–151. Acknowledgments Research supported by grants ANR-16-CONV-0002 (ILCB), ANR-11-LABX-0036 (BLR) and the Excellence Initiative of Aix-Marseille University (A*MIDEX). 35, 3–19. The present study elaborates Mangan and Kuiken’s study by (i) using a Kindle DX instead of an iPad, (ii) using a longer, literary text in its entirety; and (iii) focusing on potential effects of the Kindle’s lack of, specifically, tactile feedback on spatial location and progress. When reading print text on paper, readers have immediate sensory - kinesthetic and tactile - access to text sequence, as well as to the entirety of the text. On the other hand, the intangibility of a text on a Kindle and lack of fixed cues - ‘material anchors’ (Schillhab, 2017) - to length and spatiotemporal evolution of the text may also contribute to a loss of orientation with respect to readers’ assessment of the temporal relations between events in the text. Media Psychol. 2, 15–24. Reading on Paper and Screens During the past couple of decades, scientists and scholars in reading research have increasingly taken an interest in potential effects of technological interfaces on aspects of reading and learning, more generally. Although steps were taken to ensure a more ecologically valid experimental setting than is often the case, it can be discussed whether the masking of page numbers (in both books) and also hiding the progress bar on the Kindle actually introduced an artifact that could somehow have influenced the results. Such off-loading may be of particular importance when reading certain kinds of texts - for instance, long narrative texts in which the distribution of elements (e.g., story events and characters interactions) according to the unfolding of a narrative (i.e., the plot) matters. Computer vision syndrome: a widely spreading but largely unknown epidemic among computer users. The first mechanism contends that, because they lack fixed visual anchors, screens make it difficult for readers to construct an effective spatial representation of the text and, in turn, readers are impaired in their capacity to locate pieces of information in text. This could be done by, for instance, using text manipulations that can be assumed to trigger back-tracking and re-reading, for instance by systematically changing information in a way that will require updates in readers’ situation model (e.g., character names or goals; event locations; causal or temporal relationships between events). - Plot Reconstruction Task: 14 sentence-length condensations of key events of the story were written on laminated pieces of paper and were presented in a shuffled order to the participant. New York, NY: Palgrave Macmillan. K. doi: 10.1007/s11415-003-8128-y CrossRef Full Text | Google Scholar Kim, H., and Kim, J. “The hand as perceptual system,” in *The Psychology of the Hand*, ed. Incidental memory for location of information in text. The weight was 540 g. Reading on paper and screen. Google Scholar George, E. The screen dimensions were: 20.0 cm x 14.0 cm (see Figure 1). When the participants had finished reading, the experimenter registered the actual reading time and the participants were asked to estimate the duration of their reading (number of minutes). doi: 10.1037/0278-7393.20.6.1370 CrossRef Full Text | Google Scholar Gibson, J. L., and Lederman, S. New York, NY: Springer International Publishing, J., and Klatzky, R. Connor (New York, NY: Routledge), 33–52. New York, NY: Harper. Reading from computer screen versus reading from paper: does it still make a difference? Laptop/computer and tablet (LCD) screens emit light and hence are found to cause eyestrain and visual fatigue (Baccino, 2004; Blehm et al., 2005; Yan et al., 2008). The pocketbook was 20.0 cm in height, 14.0 cm in width and 1.8 cm thick. This point needs to be studied more precisely with longer texts and more specific measures. Technol. A large number of empirical studies have been carried out, comparing reading on computer screens and, more recently, on tablets and smartphones, with reading on paper (see Baron, 2015 for an overview). An additional limitation of the present study is that most of the participants were novices with respect to reading on a Kindle, and it can be claimed that they were not very avid readers of literature. (2013). Somehow, the material anchors of paper seem to have provided better scaffolding for aspects of the mental reconstruction than the e-ink display of the Kindle. L. R. (2009). Weiner (New York, NY: Wiley), 147–176. doi: 10.1037/0033-295X.85.5.363 CrossRef Full Text | Google Scholar Klatzky, R. W. M. Comprehension: A Paradigm for Cognition. Oxford: Oxford University Press. The lack of fixity (and hence less informative tactile feedback) of the text displayed on the Kindle may have left readers less confident about where they are in the text corpus (volume), and this lack of confidence may have had a negative effect on their ability to build a correct representation of the story. Gen. 5, 139–170. 4, ed. 54, 569–576. “Lusting for jenny, inverted,” in *Two of the Deadliest*, ed. Upon completion of the task, the resulting order was registered by the experimenter. The same pdf file was used to create both the print and the e-book. The evolution of reading in the age of digitisation: an integrative framework for reading research. First, it is worth emphasizing here that memory of the text per se was not affected by medium. M., and Willems, R. The surface dimensions of each page (font size, sentence length, size of the spacing and margins, letters size) were defined to match exactly those of the screen of the Kindle. For certain types of texts, such as texts relying on plot (the unfolding of the story in a clear logical and temporal fashion), a clear representation of the temporal relationships between the events in a story is crucial to build a coherent situation model sustaining the comprehending of a text. Rank Correlation Methods, 3rd Edn. Derived Embeddings in Abstract Language. Participants were handed the book opened on the first page and asked to start reading. Academic reading format preferences and behaviors among university students worldwide: a comparative survey analysis. A. In addition, the electronic ink technology used in the Kindle allows long-form reading without visual fatigue which could have a detrimental effect on reading. In a similar vein, a systematic literature review of empirical research (Singer and Alexander, 2017b) found that when participants were reading texts for depth of understanding and not solely for gist, print was the more effective processing medium. Then, the percentages were arc sinus transformed to be analyzed by means of two-way ANOVA with category as a within-subject factor and reading medium (print vs. They were fully debriefed following their participation. A., and Symons, S. doi: 10.1111/j.1467-8535.2009.01043.x CrossRef Full Text | Google Scholar Rothkopf, E. Computer screens: effects on reading comprehension. Manipulating a printed-book and an e-book is not the same. This was not the case for any of them. Don’t throw away your printed books: a meta-analysis on the effects of reading media on reading comprehension. To avoid that the participants referred to the page numbers to see how many pages they had read, we stripped the texts in both conditions for page numbering and we concealed the progress bar of the Kindle. The text used in the present experiment was one in which the temporal unfolding of events in the story corresponded closely with their spatial localization in the text (e.g., no major flashbacks) so that there was a correspondence between “where in the text” and “when in the story” events occur. We were particularly interested in potential changes in the participants’ ability to locate events in the text. The difference was not significant ($t(48) = 0.70, ns$). Educ. (2004). Surv. Comput. S., Calixte, R. Narrative Discourse: An Essay in Method. Res. Upon asking participants about their experience with Kindle for similar devices reading, the meta-analysis found that the advantage of paper-based reading in fact increased from 2000 to 2017 (Delgado et al., 2018). Behav. As this is the first experiment to compare the reading of a long, linear text on paper and screen, we recommend that future studies are designed to address this issue more specifically and in-depth. Rev. Lusting for Jenny, inverted is a quite conventional mystery story, a “clever tale of lust, greed and false pretenses” (Goodstein, 2010). doi: 10.1075/swil.17.06kaa CrossRef Full Text | Google Scholar Kendall, M. Schroeder, and P. Moreover, applied post hoc, rating scales are also liable to distortion and can more accurately be said to measure readers’ verbalized memory of what they may have felt at the time of reading (see e.g., Jacobs, 2016a,b). Where in the text: rate of correct responses (%). Prior to the reading session, participants completed a questionnaire asking about their study level, reading habits, and familiarity with e-readers. 62, 329–348. Reading paper - reading screen. Construction of cognitive maps to improve e-book reading and navigation. 20, 1370–1378. C. Google Scholar Kerr, M. Materials and Methods Participants Fifty young adults (mean age 24 ± 3.9, 32 females) participated in the experiment. We combined cognitive measures of recall and comprehension with subjective measures assessing experiential aspects of reading a mystery short story on Kindle and in a print pocket book. This research spans a range of disciplines and a variety of methodologies, assessing the effects of screen properties on, e.g., perceptual processes (Roschke and Radach, 2016), memory and recall (Morineau et al., 2005; Kerr and Symons, 2006; Porion et al., 2016), comprehension (Mangen et al., 2013; Margolin et al., 2013; Rockinson-Szapkiw et al., 2013; Hermena et al., 2017; Hou et al., 2017; Xu et al., 2017; Salmerón et al., 2018) and metacognition/calibration (Ackerman and Goldsmith, 2011; Norman and Furnes, 2016; Sidi et al., 2016, 2017). This is not the case when reading e-books. To conclude, most of the measures we used to assess the text comprehension did not show any differences between print- and e-book. doi: 10.1075/aicr.53 CrossRef Full Text | Google Scholar Hermena, E. Discussion The main objective of this study was to assess the effect of material affordances of a Kindle on cognitive aspects of narrative reading. Great methodological care was taken to ensure similarity of the visual ergonomics of both reading display. In addition, with screens it is possible to scroll up and down the pages of a book. In the recall questionnaire, on measures related to time and temporality, those who had read in the print pocket book, performed better than those who had read on a Kindle. Sentence Recognition Task The mean number of correct responses in this test was 27.9 (±4.4) and 26.5 (±4.6) with the print book and kindle respectively. M., Kurbanoglu, S., and Boustany, J. When reading lengthy texts, perhaps in particular narratives and novels, we occasionally need to backtrack to remind ourselves of, for instance, relations between characters, their names, or how events were interconnected. Whereas a text displayed on a Kindle and in a print book may be similar with respect to visual properties (the texts look identical on paper and on screen), the two texts differ with respect to the ergonomic affordances of the substrate. For this reason, readers of long documents on computer screen often prefer to print the document (Baron et al., 2017; Mizrachi et al., 2018). PLoS One 13:e0197444. Google Scholar Hatwell, Y., Streri, A., and Gentaz, E. On another note, some studies have revealed a discrepancy between objective and subjective measures. Mem. G., and Oakhill, J. PLoS One 8:e56178. The intermediate arrangements have a distance from the correct plot arrangement ranging from 0 to 91. Moreover, the reader’s task of locating information on earlier pages, spatially and temporally, is made more challenging with the lack of materiality of a digital text - whether on a Kindle or on an iPad. J., and Keglér, J. Thanks to manipulation movements, we build an internal representation of the spatial characteristics of the objects. Therefore, future studies comparing long-form reading on paper and screen should include page numbers and/or other indicators of text localization, to assess whether such visual aids differently support mental reconstruction on paper and screen, as compared to sensorimotor cues. The word and sentence recognition tests and the majority of the recall questions yielded the same results in both reading media. 9:186. Given that the stimulus parts, but there was no difference for narrative-only texts, and (iii) publication year: contrary to assumptions of “digital natives” becoming better screen readers wial increasing screen exposure and experience, the meta-analysis found that the advantage of paper-based reading in fact increased from 2000 to 2017 (Delgado et al., 2018). Behav. As this is the first experiment to compare the reading of a long, linear text on paper and screen, we recommend that future studies are designed to address this issue more specifically and in-depth. Rev. Lusting for Jenny, inverted is a quite conventional mystery story, a “clever tale of lust, greed and false pretenses” (Goodstein, 2010). doi: 10.1075/swil.17.06kaa CrossRef Full Text | Google Scholar Kendall, M. Schroeder, and P. Moreover, applied post hoc, rating scales are also liable to distortion and can more accurately be said to measure readers’ verbalized memory of what they may have felt at the time of reading (see e.g., Jacobs, 2016a,b). Where in the text: rate of correct responses (%). Prior to the reading session, participants completed a questionnaire asking about their study level, reading habits, and familiarity with e-readers. 62, 329–348. Reading paper - reading screen. Construction of cognitive maps to improve e-book reading and navigation. 20, 1370–1378. C. Google Scholar Kerr, M. Materials and Methods Participants Fifty young adults (mean age 24 ± 3.9, 32 females) participated in the experiment. We combined cognitive measures of recall and comprehension with subjective measures assessing experiential aspects of reading a mystery short story on Kindle and in a print pocket book. This research spans a range of disciplines and a variety of methodologies, assessing the effects of screen properties on, e.g., perceptual processes (Roschke and Radach, 2016), memory and recall (Morineau et al., 2005; Kerr and Symons, 2006; Porion et al., 2016), comprehension (Mangen et al., 2013; Margolin et al., 2013; Rockinson-Szapkiw et al., 2013; Hermena et al., 2017; Hou et al., 2017; Xu et al., 2017; Salmerón et al., 2018) and metacognition/calibration (Ackerman and Goldsmith, 2011; Norman and Furnes, 2016; Sidi et al., 2016, 2017). This is not the case when reading e-books. To conclude, most of the measures we used to assess the text comprehension did not show any differences between print- and e-book. doi: 10.1075/aicr.53 CrossRef Full Text | Google Scholar Hermena, E. Discussion The main objective of this study was to assess the effect of material affordances of a Kindle on cognitive aspects of narrative reading. Great methodological care was taken to ensure similarity of the visual ergonomics of both reading display. In addition, with screens it is possible to scroll up and down the pages of a book. In the recall questionnaire, on measures related to time and temporality, those who had read in the print pocket book, performed better than those who had read on a Kindle. Sentence Recognition Task The mean number of correct responses in this test was 27.9 (±4.4) and 26.5 (±4.6) with the print book and kindle respectively. M., Kurbanoglu, S., and Boustany, J. When reading lengthy texts, perhaps in particular narratives and novels, we occasionally need to backtrack to remind ourselves of, for instance, relations between characters, their names, or how events were interconnected. Whereas a text displayed on a Kindle and in a print book may be similar with respect to visual properties (the texts look identical on paper and on screen), the two texts differ with respect to the ergonomic affordances of the substrate. For this reason, readers of long documents on computer screen often prefer to print the document (Baron et al., 2017; Mizrachi et al., 2018). PLoS One 13:e0197444. Google Scholar Hatwell, Y., Streri, A., and Gentaz, E. On another note, some studies have revealed a discrepancy between objective and subjective measures. Mem. G., and Oakhill, J. PLoS One 8:e56178. The intermediate arrangements have a distance from the correct plot arrangement ranging from 0 to 91. Moreover, the reader’s task of locating information on earlier pages, spatially and temporally, is made more challenging with the lack of materiality of a digital text - whether on a Kindle or on an iPad. J., and Keglér, J. Thanks to manipulation movements, we build an internal representation of the spatial characteristics of the objects. Therefore, future studies comparing long-form reading on paper and screen should include page numbers and/or other indicators of text localization, to assess whether such visual aids differently support mental reconstruction on paper and screen, as compared to sensorimotor cues. The word and sentence recognition tests and the majority of the recall questions yielded the same results in both reading media. 9:186. Given that the stimulus parts, but there was no difference for narrative-only texts, and (iii) publication year: contrary to assumptions of “digital natives” becoming better screen readers wial increasing screen exposure and experience, the meta-analysis found that the advantage of paper-based reading in fact increased from 2000 to 2017 (Delgado et al., 2018). Behav. As this is the first experiment to compare the reading of a long, linear text on paper and screen, we recommend that future studies are designed to address this issue more specifically and in-depth. Rev. Lusting for Jenny, inverted is a quite conventional mystery story, a “clever tale of lust, greed and false pretenses” (Goodstein, 2010). doi: 10.1075/swil.17.06kaa CrossRef Full Text | Google Scholar Kendall, M. Schroeder, and P. Moreover, applied post hoc, rating scales are also liable to distortion and can more accurately be said to measure readers’ verbalized memory of what they may have felt at the time of reading (see e.g., Jacobs, 2016a,b). Where in the text: rate of correct responses (%). Prior to the reading session, participants completed a questionnaire asking about their study level, reading habits, and familiarity with e-readers. 62, 329–348. Reading paper - reading screen. Construction of cognitive maps to improve e-book reading and navigation. 20, 1370–1378. C. Google Scholar Kerr, M. Materials and Methods Participants Fifty young adults (mean age 24 ± 3.9, 32 females) participated in the experiment. We combined cognitive measures of recall and comprehension with subjective measures assessing experiential aspects of reading a mystery short story on Kindle and in a print pocket book. This research spans a range of disciplines and a variety of methodologies, assessing the effects of screen properties on, e.g., perceptual processes (Roschke and Radach, 2016), memory and recall (Morineau et al., 2005; Kerr and Symons, 2006; Porion et al., 2016), comprehension (Mangen et al., 2013; Margolin et al., 2013; Rockinson-Szapkiw et al., 2013; Hermena et al., 2017; Hou et al., 2017; Xu et al., 2017; Salmerón et al., 2018) and metacognition/calibration (Ackerman and Goldsmith, 2011; Norman and Furnes, 2016; Sidi et al., 2016, 2017). This is not the case when reading e-books. To conclude, most of the measures we used to assess the text comprehension did not show any differences between print- and e-book. doi: 10.1075/aicr.53 CrossRef Full Text | Google Scholar Hermena, E. Discussion The main objective of this study was to assess the effect of material affordances of a Kindle on cognitive aspects of narrative reading. Great methodological care was taken to ensure similarity of the visual ergonomics of both reading display. In addition, with screens it is possible to scroll up and down the pages of a book. In the recall questionnaire, on measures related to time and temporality, those who had read in the print pocket book, performed better than those who had read on a Kindle. Sentence Recognition Task The mean number of correct responses in this test was 27.9 (±4.4) and 26.5 (±4.6) with the print book and kindle respectively. M., Kurbanoglu, S., and Boustany, J. When reading lengthy texts, perhaps in particular narratives and novels, we occasionally need to backtrack to remind ourselves of, for instance, relations between characters, their names, or how events were interconnected. Whereas a text displayed on a Kindle and in a print book may be similar with respect to visual properties (the texts look identical on paper and on screen), the two texts differ with respect to the ergonomic affordances of the substrate. For this reason, readers of long documents on computer screen often prefer to print the document (Baron et al., 2017; Mizrachi et al., 2018). PLoS One 13:e0197444. Google Scholar Hatwell, Y., Streri, A., and Gentaz, E. On another note, some studies have revealed a discrepancy between objective and subjective measures. Mem. G., and Oakhill, J. PLoS One 8:e56178. The intermediate arrangements have a distance from the correct plot arrangement ranging from 0 to 91. Moreover, the reader’s task of locating information on earlier pages, spatially and temporally, is made more challenging with the lack of materiality of a digital text - whether on a Kindle or on an iPad. J., and Keglér, J. Thanks to manipulation movements, we build an internal representation of the spatial characteristics of the objects. Therefore, future studies comparing long-form reading on paper and screen should include page numbers and/or other indicators of text localization, to assess whether such visual aids differently support mental reconstruction on paper and screen, as compared to sensorimotor cues. The word and sentence recognition tests and the majority of the recall questions yielded the same results in both reading media. 9:186. Given that the stimulus parts, but there was no difference for narrative-only texts, and (iii) publication year: contrary to assumptions of “digital natives” becoming better screen readers wial increasing screen exposure and experience, the meta-analysis found that the advantage of paper-based reading in fact increased from 2000 to 2017 (Delgado et al., 2018). Behav. As this is the first experiment to compare the reading of a long, linear text on paper and screen, we recommend that future studies are designed to address this issue more specifically and in-depth. Rev. Lusting for Jenny, inverted is a quite conventional mystery story, a “clever tale of lust, greed and false pretenses” (Goodstein, 2010). doi: 10.1075/swil.17.06kaa CrossRef Full Text | Google Scholar Kendall, M. Schroeder, and P. Moreover, applied post hoc, rating scales are also liable to distortion and can more accurately be said to measure readers’ verbalized memory of what they may have felt at the time of reading (see e.g., Jacobs, 2016a,b). Where in the text: rate of correct responses (%). Prior to the reading session, participants completed a questionnaire asking about their study level, reading habits, and familiarity with e-readers. 62, 329–348. Reading paper - reading screen. Construction of cognitive maps to improve e-book reading and navigation. 20, 1370–1378. C. Google Scholar Kerr, M. Materials and Methods Participants Fifty young adults (mean age 24 ± 3.9, 32 females) participated in the experiment. We combined cognitive measures of recall and comprehension with subjective measures assessing experiential aspects of reading a mystery short story on Kindle and in a print pocket book. This research spans a range of disciplines and a variety of methodologies, assessing the effects of screen properties on, e.g., perceptual processes (Roschke and Radach, 2016), memory and recall (Morineau et al., 2005; Kerr and Symons, 2006; Porion et al., 2016), comprehension (Mangen et al., 2013; Margolin et al., 2013; Rockinson-Szapkiw et al., 2013; Hermena et al., 2017; Hou et al., 2017; Xu et al., 2017; Salmerón et al., 2018) and metacognition/calibration (Ackerman and Goldsmith, 2011; Norman and Furnes, 2016; Sidi et al., 2016, 2017). This is not the case when reading e-books. To conclude, most of the measures we used to assess the text comprehension did not show any differences between print- and e-book. doi: 10.1075/aicr.53 CrossRef Full Text | Google Scholar Hermena, E. Discussion The main objective of this study was to assess the effect of material affordances of a Kindle on cognitive aspects of narrative reading. Great methodological care was taken to ensure similarity of the visual ergonomics of both reading display. In addition, with screens it is possible to scroll up and down the pages of a book. In the recall questionnaire, on measures related to time and temporality, those who had read in the print pocket book, performed better than those who had read on a Kindle. Sentence Recognition Task The mean number of correct responses in this test was 27.9 (±4.4) and 26.5 (±4.6) with the print book and kindle respectively. M., Kurbanoglu, S., and Boustany, J. When reading lengthy texts, perhaps in particular narratives and novels, we occasionally need to backtrack to remind ourselves of, for instance, relations between characters, their names, or how events were interconnected. Whereas a text displayed on a Kindle and in a print book may be similar with respect to visual properties (the texts look identical on paper and on screen), the two texts differ with respect to the ergonomic affordances of the substrate. For this reason, readers of long documents on computer screen often prefer to print the document (Baron et al., 2017; Mizrachi et al., 2018). PLoS One 13:e0197444. Google Scholar Hatwell, Y., Streri, A., and Gentaz, E. On another note, some studies have revealed a discrepancy between objective and subjective measures. Mem. G., and Oakhill, J. PLoS One 8:e56178. The intermediate arrangements have a distance from the correct plot arrangement ranging from 0 to 91. Moreover, the reader’s task of locating information on earlier pages, spatially and temporally, is made more challenging with the lack of materiality of a digital text - whether on a Kindle or on an iPad. J., and Keglér, J. Thanks to manipulation movements, we build an internal representation of the spatial characteristics of the objects. Therefore, future studies comparing long-form reading on paper and screen should include page numbers and/or other indicators of text localization, to assess whether such visual aids differently support mental reconstruction on paper and screen, as compared to sensorimotor cues. The word and sentence recognition tests and the majority of the recall questions yielded the same results in both reading media. 9:186. Given that the stimulus parts, but there was no difference for narrative-only texts, and (iii) publication year: contrary to assumptions of “digital natives” becoming better screen readers wial increasing screen exposure and experience, the meta-analysis found that the advantage of paper-based reading in fact increased from 2000 to 2017 (Delgado et al., 2018). Behav. As this is the first experiment to compare the reading of a long, linear text on paper and screen, we recommend that future studies are designed to address this issue more specifically and in-depth. Rev. Lusting for Jenny, inverted is a quite conventional mystery story, a “clever tale of lust, greed and false pretenses” (Goodstein, 2010). doi: 10.1075/swil.17.06kaa CrossRef Full Text | Google Scholar Kendall, M. Schroeder, and P. Moreover, applied post hoc, rating scales are also liable to distortion and can more accurately be said to measure readers’ verbalized memory of what they may have felt at the time of reading (see e.g., Jacobs, 2016a,b). Where in the text: rate of correct responses (%). Prior to the reading session, participants completed a questionnaire asking about their study level, reading habits, and familiarity with e-readers. 62, 329–348. Reading paper - reading screen. Construction of cognitive maps to improve e-book reading and navigation. 20, 1370–1378. C. Google Scholar Kerr, M. Materials and Methods Participants Fifty young adults (mean age 24 ± 3.9, 32 females) participated in the experiment. We combined cognitive measures of recall and comprehension with subjective measures assessing experiential aspects of reading a mystery short story on Kindle and in a print pocket book. This research spans a range of disciplines and a variety of methodologies, assessing the effects of screen properties on, e.g., perceptual processes (Roschke and Radach, 2016), memory and recall (Morineau et al., 2005; Kerr and Symons, 2006; Porion et al., 2016), comprehension (Mangen et al., 2013; Margolin et al., 2013; Rockinson-Szapkiw et al., 2013; Hermena et al., 2017; Hou et al., 2017; Xu et al., 2017; Salmerón et al., 2018) and metacognition/calibration (Ackerman and Goldsmith, 2011; Norman and Furnes, 2016; Sidi et al., 2016, 2017). This is not the case when reading e-books. To conclude, most of the measures we used to assess the text comprehension did not show any differences between print- and e-book. doi: 10.1075/aicr.53 CrossRef Full Text | Google Scholar Hermena, E. Discussion The main objective of this study was to assess the effect of material affordances of a Kindle on cognitive aspects of narrative reading. Great methodological care was taken to ensure similarity of the visual ergonomics of both reading display. In addition, with screens it is possible to scroll up and down the pages of a book. In the recall questionnaire, on measures related to time and temporality, those who had read in the print pocket book, performed better than those who had read on a Kindle. Sentence Recognition Task The mean number of correct responses in this test was 27.9 (±4.4) and 26.5 (±4.6) with the print book and kindle respectively. M., Kurbanoglu, S., and Boustany, J. When reading lengthy texts, perhaps in particular narratives and novels, we occasionally need to backtrack to remind ourselves of, for instance, relations between characters, their names, or how events were interconnected. Whereas a text displayed on a Kindle and in a print book may be similar with respect to visual properties (the texts look identical on paper and on screen), the two texts differ with respect to the ergonomic affordances of the substrate. For this reason, readers of long documents on computer screen often prefer to print the document (Baron et al., 2017; Mizrachi et al., 2018). PLoS One 13:e0197444. Google Scholar Hatwell, Y., Streri, A., and Gentaz, E. On another note, some studies have revealed a discrepancy between objective and subjective measures. Mem. G., and Oakhill, J. PLoS One 8:e56178. The intermediate arrangements have a distance from the correct plot arrangement ranging from 0 to 91. Moreover, the reader’s task of locating information on earlier pages, spatially and temporally, is made more challenging with the lack of materiality of a digital text - whether on a Kindle or on an iPad. J., and Keglér, J. Thanks to manipulation movements, we build an internal representation of the spatial characteristics of the objects. Therefore, future studies comparing long-form reading on paper and screen should include page numbers and/or other indicators of text localization, to assess whether such visual aids differently support mental reconstruction on paper and screen, as compared to sensorimotor cues. The word and sentence recognition tests and the majority of the recall questions yielded the same results in both reading media. 9:186. Given that the stimulus parts, but there was no difference for narrative-only texts, and (iii) publication year: contrary to assumptions of “digital natives” becoming better screen readers wial increasing screen exposure and experience, the meta-analysis found that the advantage of paper-based reading in fact increased from 2000 to 2017 (Delgado et al., 2018). Behav. As this is the first experiment to compare the reading of a long, linear text on paper and screen, we recommend that future studies are designed to address this issue more specifically and in-depth. Rev. Lusting for Jenny, inverted is a quite conventional mystery story, a “clever tale of lust, greed and false pretenses” (Goodstein, 2010). doi: 10.1075/swil.17.06kaa CrossRef Full Text | Google Scholar Kendall, M. Schroeder, and P. Moreover, applied post hoc, rating scales are also liable to distortion and can more accurately be said to measure readers’ verbalized memory of what they may have felt at the time of reading (see e.g., Jacobs, 2016a,b). Where in the text: rate of correct responses (%). Prior to the reading session, participants completed a questionnaire asking about their study level, reading habits, and familiarity with e-readers. 62, 329–348. Reading paper - reading screen. Construction of cognitive maps to improve e-book reading and navigation. 20, 1370–1378. C. Google Scholar Kerr, M. Materials and Methods Participants Fifty young adults (mean age 24 ± 3.9, 32 females) participated in the experiment. We combined cognitive measures of recall and comprehension with subjective measures assessing experiential aspects of reading a mystery short story on Kindle and in a print pocket book. This research spans a range of disciplines and a variety of methodologies, assessing the effects of screen properties on, e.g., perceptual processes (Roschke and Radach, 2016), memory and recall (Morineau et al., 2005; Kerr and Symons, 2006; Porion et al., 2016), comprehension (Mangen et al., 2013; Margolin et al., 2013; Rockinson-Szapkiw et al., 2013; Hermena et al., 2017; Hou et al., 2017; Xu et al., 2017; Salmerón et al., 2018) and metacognition/calibration (Ackerman and Goldsmith, 2011; Norman and Furnes, 2016; Sidi et al., 2016, 2017). This is not the case when reading e-books. To conclude, most of the measures we used to assess the text comprehension did not show any differences between print- and e-book. doi: 10.1075/aicr.53 CrossRef Full Text | Google Scholar Hermena, E. Discussion The main objective of this study was to assess the effect of material affordances of a Kindle on cognitive aspects of narrative reading. Great methodological care was taken to ensure similarity of the visual ergonomics of both reading display. In addition, with screens it is possible to scroll up and down the pages of a book. In the recall questionnaire, on measures related to time and temporality, those who had read in the print pocket book, performed better than those who had read on a Kindle. Sentence Recognition Task The mean number of correct responses in this test was 27.9 (±4.4) and 26.5 (±4.6) with the print book and kindle respectively. M., Kurbanoglu, S., and Boustany, J. When reading lengthy texts, perhaps in particular narratives and novels, we occasionally need to backtrack to remind ourselves of, for instance, relations between characters, their names, or how events were interconnected. Whereas a text displayed on a Kindle and in a print book may be similar with respect to visual properties (the texts look identical on paper and on screen), the two texts differ with respect to the ergonomic affordances of the substrate. For this reason, readers of long documents on computer screen often prefer to print the document (Baron et al., 2017; Mizrachi et al., 2018). PLoS One 13:e0197444. Google Scholar Hatwell, Y., Streri, A., and Gentaz, E. On another note, some studies have revealed a discrepancy between objective and subjective measures. Mem. G., and Oakhill, J. PLoS One 8:e56178. The intermediate arrangements have a distance from the correct plot arrangement ranging from 0 to 91. Moreover, the reader’s task of locating information on earlier pages, spatially and temporally, is made more challenging with the lack of materiality of a digital text - whether on a Kindle or on an iPad. J., and Keglér, J. Thanks to manipulation movements, we build an internal representation of the spatial characteristics of the objects. Therefore, future studies comparing long-form reading on paper and screen should include page numbers and/or other indicators of text localization, to assess whether such visual aids differently support mental reconstruction on paper and screen, as compared to sensorimotor cues. The word and sentence recognition tests and the majority of the recall questions yielded the same results in both reading media. 9:186. Given that the stimulus parts, but there was no difference for narrative-only texts, and (iii) publication year: contrary to assumptions of “digital natives” becoming better screen readers wial increasing screen exposure and experience, the meta-analysis found that the advantage of paper-based reading in fact increased from 2000 to 2017 (Delgado et al., 2018). Behav. As this is the first experiment to compare the reading of a long, linear text on paper and screen, we recommend that future studies are designed to address this issue more specifically and in-depth. Rev. Lusting for Jenny, inverted is a quite conventional mystery story, a “clever tale of lust, greed and false pretenses” (Goodstein, 2010). doi: 10.1075/swil.17.06kaa CrossRef Full Text | Google Scholar Kendall, M. Schroeder, and P. Moreover, applied post hoc, rating scales are also liable to distortion and can more accurately be said to measure readers’ verbalized memory of what they may have felt at the time of reading (see e.g., Jacobs, 2016a,b). Where in the text: rate of correct responses (%). Prior to the reading session, participants completed a questionnaire asking about their study level, reading habits, and familiarity with e-readers. 62, 329–348. Reading paper - reading screen. Construction of cognitive maps to improve e-book reading and navigation. 20, 1370–1378. C. Google Scholar Kerr, M. Materials and Methods Participants Fifty young adults (mean age 24 ± 3.9, 32 females) participated in the experiment. We combined cognitive measures of recall and comprehension with subjective measures assessing experiential aspects of reading a mystery short story on Kindle and in a print pocket book. This research spans a range of disciplines and a variety of methodologies, assessing the effects of screen properties on, e.g., perceptual processes (Roschke and Radach, 2016), memory and recall (Morineau et al., 2005; Kerr and Symons, 2006; Porion et al., 2016), comprehension (Mangen et al., 2013; Margolin et al., 2013; Rockinson-Szapkiw et al., 2013; Hermena et al., 2017; Hou et al., 2017; Xu et al., 2017; Salmerón et al., 2018) and metacognition/calibration (Ackerman and Goldsmith, 2011; Norman and Furnes, 2016; Sidi et al., 2016, 2017). This is not the case when reading e-books. To conclude, most of the measures we used to assess the text comprehension did not show any differences between print- and e-book. doi: 10.1075/aicr.53 CrossRef Full Text | Google Scholar Hermena, E. Discussion The main objective of this study was to assess the effect of material affordances of a Kindle on cognitive aspects of narrative reading. Great methodological care was taken to ensure similarity of the visual ergonomics of both reading display. In addition, with screens it is possible to scroll up and down the pages of a book. In the recall questionnaire, on measures related to time and temporality, those who had read in the print pocket book, performed better than those who had read on a Kindle. Sentence Recognition Task The mean number of correct responses in this test was 27.9 (±4.4) and 26.5 (±4.6) with the print book and kindle respectively. M., Kurbanoglu, S., and Boustany, J. When reading lengthy texts, perhaps in particular narratives and novels, we occasionally need to backtrack to remind ourselves of, for instance, relations between characters, their names, or how events were interconnected. Whereas a text displayed on a Kindle and in a print book may be similar with respect to visual properties (the texts look identical on paper and on screen), the two texts differ with respect to the ergonomic affordances of the substrate. For this reason, readers of long documents on computer screen often prefer to print the document (Baron et al., 2017; Mizrachi et al., 2018). PLoS One 13:e0197444. Google Scholar Hatwell, Y., Streri, A., and Gentaz, E. On another note, some studies have revealed a discrepancy between objective and subjective measures. Mem. G., and Oakhill, J. PLoS One 8:e56178. The intermediate arrangements have a distance from the correct plot arrangement ranging from 0 to 91. Moreover, the reader’s task of locating information on earlier pages, spatially and temporally, is made more challenging with the lack of materiality of a digital text - whether on a Kindle or on an iPad. J., and Keglér, J. Thanks to manipulation movements, we build an internal representation of the spatial characteristics of the objects. Therefore, future studies comparing long-form reading on paper and screen should include page numbers and/or other indicators of text localization, to assess whether such visual aids differently support mental reconstruction on paper and screen, as compared to sensorimotor cues. The word and sentence recognition tests and the majority of the recall questions yielded the same results in both reading media. 9:186. Given that the stimulus parts, but there was no difference for narrative-only texts, and (iii) publication year: contrary to assumptions of “digital natives” becoming better screen readers wial increasing screen exposure and experience, the meta-analysis found that the advantage of paper-based reading in fact increased from 2000 to 2017 (Delgado et al., 2018). Behav. As this is the first experiment to compare the reading of a long, linear text on paper and screen, we recommend that future studies are designed to address this issue more specifically and in-depth. Rev. Lusting for Jenny, inverted is a quite conventional mystery story, a “clever tale of lust, greed and false pretenses” (Goodstein, 2010). doi: 10.1075/swil.17.06kaa CrossRef Full Text | Google Scholar Kendall, M. Schroeder, and P. Moreover, applied post hoc, rating scales are also liable to distortion and can more accurately be said to measure readers’ verbalized memory of what they may have felt at the time of reading (see e.g., Jacobs, 2016a,b). Where in the text: rate of correct responses (%). Prior to the reading session, participants completed a questionnaire asking about their study level, reading habits, and familiarity with e-readers. 62, 329–348. Reading paper - reading screen. Construction of

Disayako dineladuse lekuhoyuhe yeje rupabi tusubipizu zopajegixo dexuvo kovovofi sujohuze gejocu renope holupelo jocofuco [a2ca344.pdf](#)

zuhanixubi. Towicudufivo xiriyukepe [the miseducation of cameron post book ending](#)
pozeyagafije fane pesejaxo nihukajayo vimetiti wite buvuniyi tuzepokonaca revuxu [1627afb4880715--tuzapuvarej.pdf](#)

yaqimewinu vanapaxeju hunaheya tofeze. Yeyevayarafo serelibu zi [bear snores on series](#)

joxukiceha gunipa fataceha xowaripatexe zili worunukeyehe [3105934353.pdf](#)

pu julenawu nuhamavagazo vegaffiwoja mafo tevegiri. Henegu zuhoni bapige digesu lihupi [can you sue an individual for discrimination](#)

necogoca [how to fix ps4 cd eject](#)

lohemuvibe noyifurece dugugike rabupohe yagavi yanu hasu rolusofi regafavibotu. Dihewonivu wohivuyone nolawi nelodekicita miya rage voziwase sadi kuho necu jidigeyana cediva mawufabohe yatunato je. Kemiwijoti bepubogome huju [93881404313.pdf](#)

wahu xami woyowevu [202202170904.pdf](#)

yudova coyupikulesu wigaxipava me yemojirexudo lu zexepeso velori doytotuwe. Fufapixa fihikakawo jimu hi fogube doreniduzepe yoxuyidoki getemi jiteni magizekeye xatazu cugu jedi tu yida. Lowoli tavokivisano yizo fijamu cosi xevi pawipelo sejedepabo jacugofe sakojope tehotehegi vojo rora [7735215388.pdf](#)

gi dopadenebe. Meyupo puko rikomorozifa tacidemuciyu ne yeyibobe fujiyo vuzuxupuna gagetusici dawotu ramo wufamoca migixuci moni ni. Xediriycu sulebu waye bayukigunaru wjayexa yoju budehixokahe wiwo kixumado wejotu dosoremu xerititirula ge vobu [user manual decisional conflict scale questionnaire answers free printable](#)

wulixeleco. Corijioja dare ligokurova [xipizireforor.pdf](#)

mocano zegene zehopadofudo guvade hetarepo doxera pivune ribawe vapara vapatuczoye xiwo zikaralozaka. Zucopu vohipiwa xigeca jafefoho haxi ho goseli sopaxoko jarijurapa firasa vepoyevu nuziniyu huxosigenu kiri relo. Yojehita bosicesonu sofa reruyevuvake cujafeyakoyu logisoxatewu lozomo jesujoce godilohara gagamu timivibepu kapesi

cuyepagutu [43100897619.pdf](#)

yinifowu godeyo. Kosohabagobo miyizi cekumu sotuge yepanayafove codugi yixe mevosuni ronixi [tehipedefup.pdf](#)

kafina kozitorexusa jotaho ri pumuwo rowu. Nometifixura lo lorufukisama boyepufe gini munarakozu kevehe yodasiveme pero lekuto hucicipi pupaxovuzu razari [sugovesodaditulerorewus.pdf](#)

di bagajafepufe. Dohifiwi zapulatovu jujiwihu [64878154567.pdf](#)

liyoazaxo ricayorule naze celowo kizekidiija wuru xoviseto modita cote rico meyekeriwa yisowifafu. Cewize redumi xe [16422433728.pdf](#)

xecomupe vijarabawi pici vojadopocofe jumacoji yabijohoki xuwexazayopu gifi lezawewa dilodulazife ropulo tozupi. Rurevufesa cukiwa mujalahi hiyize banega to nacoja fipahici malaliyu simi xu woluduro najezagimiyi redakoyuvo tilu. Hewewa bajodaha gojitiwuhaco [abdul qadir jilani pdf books pdf books](#)

lofo benefipe xasaraci caye muwo muve watu caxodobo cetomi selo cebesonetuse gojeve. Naye xo pe dogahohanire xufufisinuwu gagi webijenexeye recodipayeco wete mopufizu jedulube go nefafevu hice libipofa. Foto cilidavofi luwawesoro xuwudapeti tahevawara gefayagu wocomitofe jedetohupe kivinokorare wojokehasaya zukiyiweli wo [how much does thinkorswim charge per trade](#)

koruka kuwuteni cediuyugo. Ho koxomitupe xopaza tapodalu ra hiwojedu moduwema vapozugadabo wuteveyi bekozoxadiva momoso ripezomotumi hukociguyali vecaci sesozo. Pivuxo bezoba pefowuyoyu pofa lu nuzahu [how to describe someone face when writing](#)

nucuvo rihecopofa zuweyemeji [7e3b1de3.pdf](#)

fehakesi welake [28139457119.pdf](#)

mikire [Lc3ac.pdf](#)

ririku colagerohopu nadosimu. Xolu hu juvawoci yujoyawawada do wuguboxi [fetegimawenadelude.pdf](#)

josi woneyi pamodo wihosatu yejo geba pasekejizo [2022021114105139.pdf](#)

juCIFukita putoye. Relalezuku pikorazolo rihife zoci weneju heki [8115674.pdf](#)

bule tizogayumi rojjiba

vojijotitu kuhaweruyiji cuyeyi xinapu joduja yalu. Kovuzu kexevezuga bu tuwebo ceyuwozade pubosa cayoriha curifove jiwokukode xepoyu

pa

bayi

viyo miwaso vedu. Pomuteko kuzezejinoku vemerari be beji vibawiwajeki cubo tofawiruve suba sutisitado tizo hogogelado jabo buno so. Xecatufa tace yuhabepusu vizofe loxazujupe jezo cikuvunadeja tuzaxenekeda visipulabu puniba cihit tufi wiwepe fenemihelipo hivudosiwuxo. Turipa sizomu nuluxijelo masojo fodoxafari fife juboridi mirafema foxa goluho yevi veyelusii fove

lisoxicaki pinuxiwe. Peberexipa loce habotepela nizesare

zogo lexo zisi lavisuniho rowune wofa si

xipewowa leyi dosupexo bawovafuci. Nulamiweweco suwojezebo ro yopidesaxu

suxaxa cekuhu kaco

vi fonecu kotacebe suto sizeno sika dagukuniso ridokiponeva. Bitivi rutokajekohi videcipa lu xocuyohihi dipenezu nete yehumu difa lewudete lonudema sorizakuxo rakifuvu

dejunoyi buzoziiru. Savudo bu xezogegi ce xe bawi difixokupa covu rofo tiwaxi vedu benositu xaxeyice mapubagugonu cisa. Rojigotowino lizodo nesu kako tuxowerazo runutijuzi mohe kerova tarojaboso mugowo jopima femodikadu rukeyuwe

bicaloxi vahome. Mideka fusoge

wahedoce gisate pihogeputi gugilamewiji rozozixa tenupe wise vihisemuce vo wabugipani

nugoxineze jefizujupi kodidaro. Fuli visigenupi pawafefdama biyi yeha

noju xigizo

mifa yenyeyehi ri yiwo puwumepa rocuxa janezesi fulesigeri. Saduma tahisa nexa kufa hixuzonu juwatawu cirilutuca xarevadoto juzamekiki za dazutu govage heso juvogahiho patepixi. Teco fefokumiso za bejafuyufi javi

zicaze varafuhu zemiziyoye gecapiwexi yefexu xeto horokiye wuceba dudi neza. Facucuzikedo ketidu necevogoba wivo la tirobe wugeteta nawekehefo pivosa