

# The superiority of graphics over text in long-term memory retention

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## Abstract

Graphical representations of data are pervasive in modern communication and are often used to convey socio-economic, scientific and medical information. Despite their popularity, it is still unknown whether they can enhance the long-term retention of their content. We conducted an incidental delayed recall task with psychology undergraduates (N=92), in which participants read about the evolution of a socio-economic phenomenon, with few datapoints presented either as a graphics, a text, or a table. We found that graphics facilitated the remembering of the general trends of the data after a two-hour interval. No advantage was found on immediate recall of numerical values in another sample of participants (N=80). Thus, even for equal initial encoding of numerical information, and even for very concise materials, graphics facilitate long-term retention. Overall, the study reveals the potential of graphics as effective tools for enhancing memory retention and therefore highlights their valuable role in educational settings.