

Summary

Hypermnesia refers to the increased recall of items across repeated tests, without additional studying or learning opportunities (Wallner & Bauml, 2018). Typical experiments that test hypermnesia expose participants to a set of items, such as words or images, and then participants are asked to recall these items across repeated tests. Hypermnesia is measured by comparing reminiscence to inter-test forgetting. Reminiscence occurs when participants are able to recall new items that were not recalled on earlier tests. Inter-test forgetting occurs when participants are able to recall items on earlier tests, but then fail to recall them on subsequent tests. Hypermnesia then occurs when reminiscence exceeds inter-test forgetting. However, the mechanisms underlying hypermnesia remain unclear. In traditional experiments, participants are not aware that they will be receiving multiple recall tests. This study aimed to investigate whether informing participants in advance about the number of recall tests they will receive influences hypermnesia. The study measured overall item recall, reminiscence, inter-test forgetting, and incorrect items. Participants were presented with a PowerPoint presentation containing 35 line drawings and were subsequently given three free-recall tests. It was hypothesized that participants who were informed about the number of recall tests they would receive (we called this group the “no context change group”) would exhibit less hypermnesia compared to those who were not informed (we called this group the “context change group”). The results revealed that informing participants about the number of recall tests did not affect overall item recall, gains, losses, or errors. To further explore these findings, a second experiment was conducted using words instead of line drawings to increase task difficulty. Previous research has shown that it is more difficult for participants to recall words instead of images, as images are dually encoded whereas words are only encoded once. The results of the second experiment were consistent with those of the first, except that a significant difference in item gains was found between the context change and no context change groups. These findings suggest that when using words instead of line drawings, informing participants about the number of recall tests leads to more gains across tests. We believe that when participants were told there would be three tests, they implemented an effort management strategy whereby participants distributed their efforts across the three tests. Implementing an effort management strategy uses cognitive resources, which may have led to minimal reminiscence in the no context change group compared to the context change group. Overall, our study provides some evidence that not informing participants about the number of recall tests they will receive results in greater reminiscence.