



Classic

John Sweller
1988



Contemporary

Phillip Sands
2019



In Brief

You will be familiar with John Sweller's Cognitive Load Theory - it postulates that working memory is of a finite capacity and too much information in too short a timespan has the potential to overload this capacity, making learning less than optimal. The application of this in the computer science classroom has been studied on numerous occasions, but Phillip Sands summarised its effects very succinctly in the linked article. We can also look to Raj, Patel, Halverston and Halverston's work on Live Coding and its potential to reduce the cognitive load by spreading the responsibility for the task out, as mentioned in Raspberry Pi Foundation's Quick Read. All links to the right.



Important Literature Links

Sands, P. (2019). Addressing cognitive load in the computer science classroom. *ACM Inroads*, 10(1), pp.44-51. doi:<https://doi.org/10.1145/3210577>.

Raj, A.G.S., Patel, J.M., Halverston, R. and Halverston, E.B. (2018). Role of Live-coding in Learning Introductory Programming. *Proceedings of the 18th Koli Calling International Conference on Computing Education Research - Koli Calling '18*. [online] doi:<https://doi.org/10.1145/3279720.3279725>.

Raspberry Pi Foundation (2020). *Quick Reads - Live Coding* [Online]. Available at: <https://www.raspberrypi.org/research/> [Accessed 23 May 2024].

