

The Coherence Principle

Theory

The coherence principle (also called *seductive details*¹⁾ effect) claims that extraneous material that may be interesting or motivating but is irrelevant for learning objectives generally wastes learning resources and **hinders learning of important material**. This assumption is grounded in the fact that human cognitive resources are limited. Still, [cognitive load theory](#) predicts this effect will only occur if the cognitive load imposed by important learning material is high enough.²⁾

Practice

Seductive details can appear in virtually any format, but often as

- text, or
- external links.

Research status

A number of studies on the effect of seductive details have demonstrated:

- negative effects on learning of important material³⁾
- lack of negative effects on learning of important material (one of

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¹⁾

Garner, Ruth, Mark G. Gillingham, and C. Stephen White. Effects of 'Seductive Details' on Macroprocessing and Microprocessing in Adults and Children. *Cognition and Instruction* 6, no. 1: 41. 1989.

²⁾

Park, Babette, Roxana Moreno, Tina Seufert, and Roland Brünken. Does cognitive load moderate the seductive details effect? A multimedia study. *Computers in Human Behavior* 27, no. 1: 5-10. January 2011.

³⁾

For details see:

⁴⁾

Moreno, R., Mayer, R., Spires, H. and Lester, J. The case for social agency in computer-based teaching: Do students learn more deeply when they interact with animated pedagogical agents?. *Cognition and Instruction*, 19(2), 177-213. 2001.

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Mayer, R., Heiser, J. and Lonn, S. Cognitive constraints on multimedia learning: When presenting more material results in less understanding. *Journal of Educational Psychology*, 93(1), 187-198. 2001.

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