Effects of explanation expectancy on text comprehension: An experiment and a meta-analysis

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Prior studies have investigated whether the expectation that one will explain learned materials after learning (explanation expectancy) promotes text comprehension. Such research, however, has had inconsistent results. In Study 1, we examined whether an elaborative explanation orientation, which refers to the belief that it is important to elaborate and organize a passage when explaining, moderated the effect of explanation expectancy. The results showed neither a moderation effect nor an effect of explanation expectancy. This suggests that the effect size of explanation expectancy was not large, so that a single experimental research with limited sample size could not reliably find a positive effect. In Study 2, a meta-analysis was conducted to infer more accurately the influence of explanation expectancy on text comprehension. Based on a sample of 7 reports ($n = 289$), the results showed that the effect size $g$ for explanation expectancy was $0.51$ (95%CI $= [0.10, 0.91]$). This finding demonstrates that the inconsistent results of previous research could be caused by small sample sizes, and explanation expectancy improves text comprehension.

Keywords: explanation expectancy, text comprehension, situation model, meta-analysis.

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