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Impact of slide-based lectures on undergraduate students' learning: Mixed effects of accessibility to slides, differences in note-taking, and memory terms

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Impact of slide-based lectures on undergraduate students' learning: Mixed effects of accessibility to slides, differences in note-taking, and memory terms

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Abstract

This paper addresses the effects of access to slide copies during lectures using PowerPoint® for undergraduate students on their learning outcomes depending on the quantity of notes they take and immediate vs. delayed testing. Seventy-one students repeatedly participated in the following six lecture conditions: accessibility to slides (full, partial, and no slide copy) × memory term (immediate and delayed test). Thus, the present study adopted a 3×2 within-subjects design with two note-taking covariates (the quantity of words and markers in notes). A mixed-effects model and counterbalancing method were applied to control idiosyncrasies and order effects caused by repeated measurement. The results revealed that accessibility to slide copies and students' note-taking predicted their learning outcomes. The effects of no slide copy were significant in both

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