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Intrinsic Interest and Learning

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The hypothesis investigated in this study is that interesting material is easier to learn than uninteresting material. In learning research, one of the most important causal factors in determining how much is learned has been time on task. When motivation has been investigated, the emphasis has been on how extrinsic factors modify the willingness of research participants to spend more time on the task at hand. The effects of intrinsic factors like prior interests or personal goals have not been as intensively investigated. In this study, intrinsic interest level was directly manipulated by creating two paragraphs containing identical target sentences in different contexts, one presumably more interesting than the other. Viewing time, familiarity, and personal interest were measured to isolate these potential factors from each other and the principal independent variable of context version.

Method

Participants

Fifteen undergraduates in lower-division psychology classes volunteered to participate in exchange for extra credit.

Materials

Two versions of eight different paragraphs were prepared with exactly the same target sentence embedded in either a more or less interesting context. The interesting versions were more personal in nature rather than a "dry" textbook-like presentation. Otherwise, the language and length of the two paragraphs were held to be as close as possible. Questions and appropriate answers were prepared for each set of paragraphs.

Procedure

On the first day, participants read one version of each of the eight paragraphs, and rated them for familiarity and personal interest on a ten-point scale. Order of presentation and which version was presented was varied randomly across participants, but constrained such that each participant read exactly four of each version (i.e., more or less interesting). Two days later, participants were given paragraph titles and questions for each of the eight paragraphs. Answers were scored independently by two raters. The raters did not know which version of each paragraph had been read by each participant.

Results

Answer Accuracy by Paragraph Version

The average points for answers given in response to reading the more interesting version of a paragraph was 2.36 (maximum possible was 6); but only 1.68 when reading the less interesting paragraph. A within-subject t-test indicated this was a significant difference (t (14) = 3.50, $p < .01$). Inter-rater consistency on scoring these answers was quite high (r (118) = .90, $p < .001$).

Correlations between Ratings and Viewing Time

Correlations were calculated between familiarity ratings, personal interest ratings, total time that the paragraph was visible on the computer screen, and the correct answer scores assigned by the raters. Only personal interest ratings were significantly correlated with the correct answer scores (r (118) = .24, $p < .05$), despite the relatively high correlation between familiarity and interest ratings (r (118) = .53, $p < .01$). All other corelations were quite small (largest r (118) = .11, $p > .1$).

Analyses by Paragraph Version

Mean familiarity ratings, personal interest ratings, and total viewing times did not significantly differ between the two paragraph versions. For the more interesting paragraphs, none of these were significantly correlated with the correct answer scores (largest r (58) = .06, $p > .1$). However, for the less interesting paragraphs, personal interest ratings were highly correlated with the correct answer scores (r (58) = .51, p < .01) and familiarity ratings less so (r (58) = .30, $p < .05$). Viewing time again was essentially unrelated (r (58) = .08, $p > .1$).

Conclusions

Results were consistent with the hypothesis that intrinsic interest affects the ease of learning material. This is supported by the difference in correct answer scores obtained for the two paragraph versions, and by the strong correlation between personal interest ratings and correct answer scores for the otherwise less interesting paragraphs. No evidence was found for the hypothesis that intrinsic interest varies the time on task.