Interleaving and blocking: How it impacts promotional video?

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Introduction

Researchers often debate interleaving versus blocking to find the most effective learning strategy, with studies showing interleaving benefits subtle category distinctions, while blocking supports learning shared features. Theories like reactivation and sequential attention support the arguments by emphasising the importance of matching strategies to the learning context. Similarly, influencer marketing and word-of-mouth strongly shape consumer behaviour, though trust in such content can be manipulated, revealing the emotional and irrational nature of many purchasing decisions.

Method

Participants	Aged 18 or above, N = 87
Materials	Videos *interleaved* or *blocked*, random, 50-50
	3 brands, *Bassmax*, *Soundbeat* and *Deepwaves*
	9 features, at 3 performance levels
Measures	Brand feature recall
	Confidence level
	Brand ranking discrepancy

Hypothesis

H1 Higher levels of recall rate in interleaving group
H2 Higher levels of confidence level in interleaving group
H3 Correlation between feature rank and brand choices

	Performance level		
	High	Medium	Low
Bassmax	Feature 4, 7, 8	Feature 2, 3, 6	Feature 1, 5, 9
Soundbeat	Feature 1, 2, 9	Feature 4, 5, 7	Feature 3, 6, 8
Deepwaves	Feature 3, 5, 6	Feature 1, 8, 9	Feature 2, 4, 7

1 Battery life, 2 Quick charging speed, 3 Bluetooth, 4 communication range, 5 weight, 6 colour, 7 microphones, 8 driver unit, 9 frequency range

Results

H1: Higher levels of recall rate in interleaving group: (M = 4.5, SD = 2.2), $t(85)$ = –3.2, p = .002, with a Cohen's d of –.687.

H2: Higher levels of confidence level in interleaving group: (M = 26.4, SD = 8.01), $t(87)$ = –2.76, p = .007), with a Cohen's d of –0.591

H3: Correlation between feature rank and brand choices: A higher rank of feature 3 (Bluetooth) would increase the likelihood of choosing Soundbeat over Bassmax (B = –0.793, p = .015, Odds Ratio = 0.453, 95% CI [0.239, 0.858]).

Other findings:
Variance between brands and brand choice prediction discrepancy: statistically significant effect of brand on brand choice prediction discrepancy, $F(2, 84)$ = 5.11, p = .008

Youtube

Soundbeat
4-40000 hertz

Headphone promotional video (blocked)

Bassmax   Soundbeat   Deepwaves

Bluetooth 5.2   Bluetooth 5.0   Bluetooth 5.3

Headphone promotional video (interleaved)

This above displays the videos you may watch. You will be randomly assigned to watch only ONE of them in a 50/50 chance.
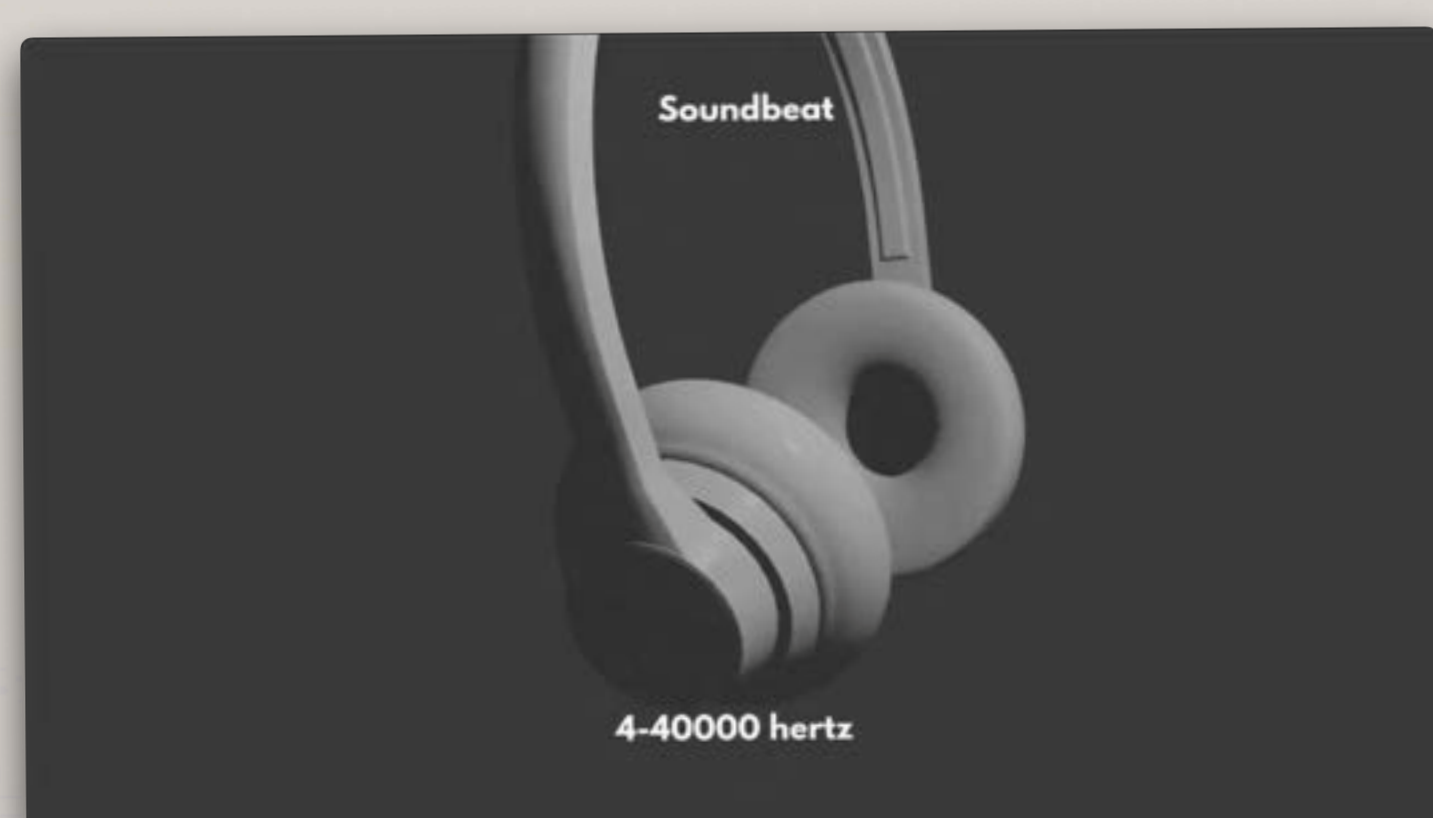
Discussion

Sellers of infrequently bought products should use interleaved review videos to improve consumer memory and influence purchase decisions.

Confidence aligned with recall performance, suggesting better understanding. Interleaving improved discriminability, made comparison across brands easier. Blocked made it harder to compare features, lowering confidence and recall.
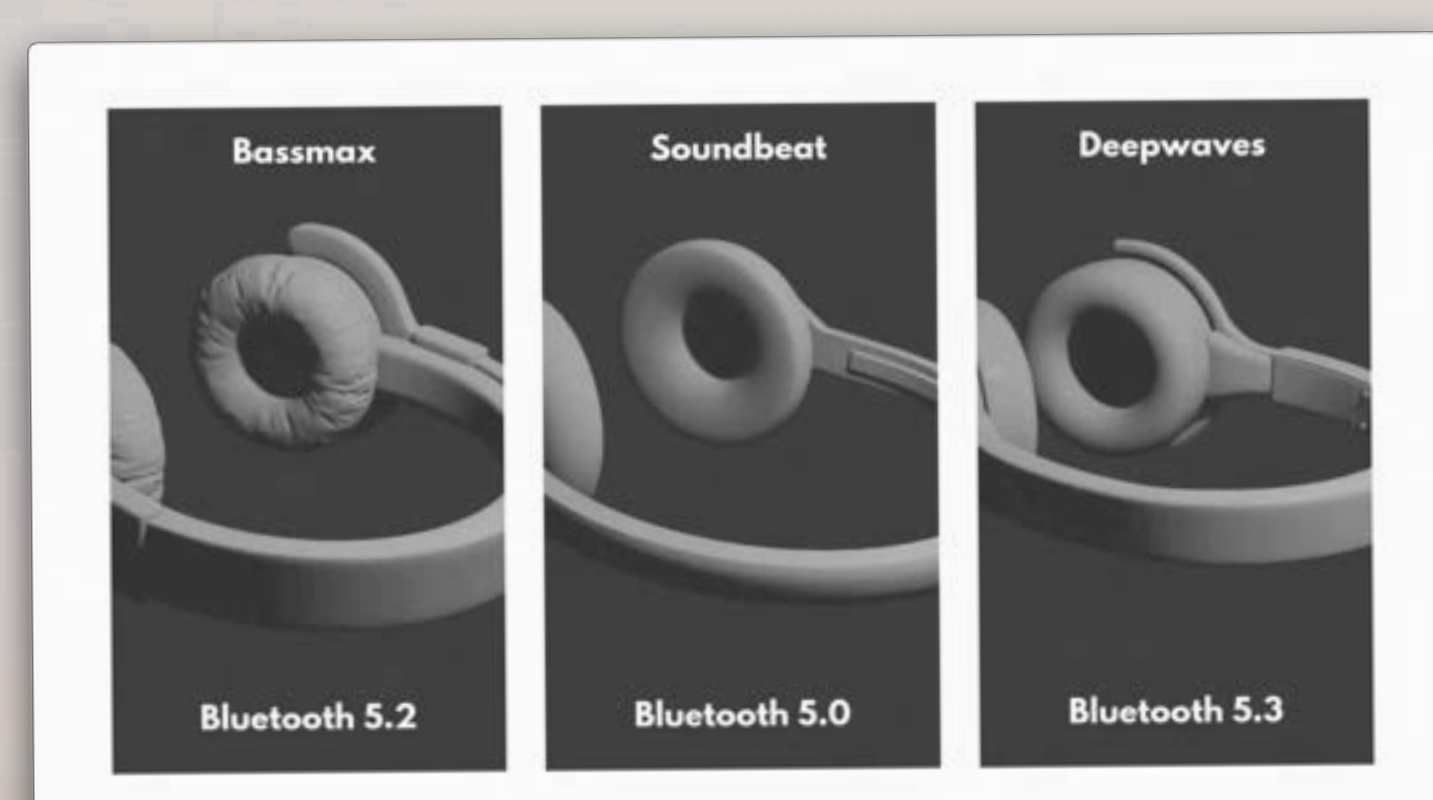
The discrepancy suggests that uncertainty of a brand may be due to low familiarity in its features. Difficult-to-evaluate features may be undervalued, leading to misjudgment in brand ranking.

Better recall in interleaved viewing may explain more accurate brand choices based on feature performance.

Annisa, I. T., & Wijaya, A. P. (2019). Pengaruh Keterlibatan dan Pengetahuan Produk Terhadap Keputusan Pembelian Jamu Masuk Angin Kemasan. Management Insight: Jurnal Ilmiah Manajemen, 14(2), 122-137. https://ejournal.unib.ac.id/index.php/Insight/article/download/8909/pdf
Birnbaum, M. S., Kornell, N., Bjork, E. L., & Bjork, R. A. (2012). Why interleaving enhances inductive learning: The roles of discrimination and retrieval. Memory & Cognition, 41(3), 392-402. https://doi.org/10.3758/s13421-012-0272-7
Brunmair, M., & Richter, T. (2019). Similarity matters: A meta-analysis of interleaved learning and its moderators. Psychological Bulletin, 145(11), 1029-1052. https://doi.org/10.1037/bul0000209
Higgins, J. P. T., Thompson, S. G., Deeks, J. J., & Altman, D. G. (2003). Measuring inconsistency in meta-analyses. BMJ, 327(7414), 557-560. https://doi.org/10.1136/bmj.327.7414.557
Hsee, C. K., & Zhang, J. (2004). Distinction bias: misprediction and mischoice due to joint evaluation. Journal of Personality and Social Psychology, 86(5), 680-695. https://doi.org/10.1037/0022-3514.86.5.680
Kornell, N., & Bjork, R. A. (2008). Learning concepts and categories. Psychological Science, 19(6), 585-592. https://doi.org/10.1111/j.1467-9280.2008.02127.x
Zulkiply, N., McLean, J., Burt, J. S., & Bath, D. (2011). Spacing and induction: Application to exemplars presented as auditory and visual text. Learning and Instruction, 22(3), 215-221. https://doi.org/10.1016/j.learninstruc.2011.11.002