SUPPORTING RESEARCH SUMMARY

MUSIC AS A DEVICE TO AID MNEMONIC RETENTION

- Music can dramatically enhance retention by creating long-lasting relationships between pieces of information, especially if the material is entertaining to the audience. 1, 2

- Unlike numbers, words don’t have inherent relationships between them, so comprehension is typically difficult to teach. Retention is usually best achieved by repeated contextual usage. 3

RESEARCH EXCERPTS

- Regardless of whether someone is entering kindergarten or completing a Ph.D., people naturally need to learn new words in order to provide a cognitive foundation for the ongoing assimilation of additional information. 4

- With this premise in mind, Defined Mind, Inc. reviewed the universe of vocabulary-building and reading skills media, and determined that, although popular, listening to or reading definitions and their contexts was an insufficient methodology to reliably improve comprehension. Consequently, the Company turned to music to create a stronger base for retention. 5

- Over the past century there has been considerable scientific research conducted to establish the impact of music on cognition and memory, and it has been widely affirmed that music significantly enhances retention. This effect is clearly illustrated by a passage from Dr. Karl Kimmel, Ph.D.’s 1997 Mnemonics White Paper:

  Supporting evidence is offered by Rubin, who studied the interaction of music with long-term verbatim memory. 31 undergraduates were placed in the Right music group (“The Star Spangled Banner”), 32 in the Wrong music group (“Stars and Stripes Forever”) and 32 in the No music group - and asked to write the lyrics of the “National Anthem.”

  Rubin states: The strongest results cannot be given here in a quantitative fashion. The subjects in the No music condition behaved as most subjects in verbal learning experiments do, with perhaps more of an expression of frustration. The subjects in the Wrong music condition appeared to be in slightly more pain, and a few on occasion put their hands over their ears. Most interesting, however, were the subjects in the Right music condition. They would write as fast as they could until the music got ahead of them, and then they would switch to the behaviors of the wrong music condition. By the second or third repetition of “The Star Spangled
Banner” almost all of the subjects in the Right music condition adopted a strategy of waiting until the music came around to where they had stopped writing the previous time, and then writing another burst until the music got ahead of them again. The effect was quite striking and has since provided an effective classroom demonstration of the role of coding in memory.” (Rubin, 1977, p.618) 6

Subjects in the Right, Wrong and No music groups scored an average of 52, 28, and 32 of the 80 words recalled. Recall of lyrics is better facilitated by melody (Right music group), than by a descriptive title (No music group) and is inhibited by a wrong music cue (Wrong music group). 7

Rubin’s results have been repeated over decades, and while there are nuances to the contexts of learning and retention, the broad body of behavioral research and statistical evidence strongly supports the concept that music aids long-term memory.

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