

Kossack, S. (2007). Comparing the effects of high and low learning pathway instructional approaches on vocabulary mastery of middle school at-risk learners. *The International Journal of Learning*, 14, 199-206.

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Summary: This study compares the efficacy of a traditional dictionary use approach to vocabulary mastery with a non-traditional approach, called visual definitions. Visual definitions uses two pathways (verbal/linguistic and logical/mathematical) to assist students, particularly at-risk students, acquire vocabulary in a science content-area class. If visual definition efficacy is determined, its practice could be employed as part of an intervention program for at-risk students.

Assumptions:

- Current brain theory emphasizes engagement and involvement as key ways to increase understanding. This process stands in contrast to a more traditional rote memorization techniques.
- Visual definitions could be more efficacious in assisting at-risk students achieve vocabulary mastery in content-area classes.
- Multiple channels of learning are more beneficial in vocabulary mastery than a single channel, in this case dictionary use, which only emphasizes verbal/linguistic skills.

Results:

- Visual definition use had greater gains for the participants than the traditional method of locating definitions in a dictionary.
- The number of words gained doubled when using visual definitions over dictionary definitions.
- The gains in vocabulary test performance were statistically significant.

Conclusions:

- Using only one channel of learning is less efficacious than using two or more channels of learning.
- Visual definitions require students to use verbal/linguistic and logical/mathematical strategies in understanding content-area vocabulary. In contrast, dictionary use only employs verbal /linguistic strategies.

Suggestions for Teachers:

- Instructional practices that emphasize multiple pathways to learning may be more desirable than simply using one pathway.
- Teachers may want to use visual definitions as one approach to vocabulary mastery.

- Multiple pathways for vocabulary mastery may be of particular use in content-area classrooms where content-specific words are not reinforced outside of the particular classroom.
- Visual definitions may be of particular use for at-risk students struggling with content-specific vocabulary.

Suggestions for Literacy Leaders:

- Explore the need to determine what impact, if any, the novelty of the intervention had on the gains achieved in this study.
- Look at other intelligences to determine if they are as beneficial as the visual/linguistic and logical/mathematical intelligences that were used in this study.