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Mini Review

Gilks' Use of Facilitated Mental Imagery in the Classroom toward Improved Learning

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Abstract

Research in the field of cognitive and instructional psychology that encourages teacher facilitation of students' deliberate strategy use within the inclusive classroom is needed toward the improvement of educational achievement. The difference between high and low learner test scores within the inclusive classroom environment requires attention toward closing the gap in favor of growth. The reviewed study shows cognitively mediated skill building within the inclusive environment as both possible and effective toward increased test scores for lower learners without added personnel or externalized strategies and/or intervention. Gilks' research on the use of Facilitated Mental Imagery (FMI) shows learning to memory improvement in struggling learners within the inclusive classroom setting. The FMI classroom strategy paired the classroom teacher's auditorily delivered instruction with the student's own mental representation toward improvement demonstrated via pre-posttest scores.

Keywords: *Psychology; Cognition; Instruction; Facilitated Mental Imagery (FMI)*

It is with great pleasure to provide this review article on Gilks' [1] use of Facilitated Mental Imagery (FMI) toward teacher supported and student governed cognitive and instructional strategy gain within the inclusive educational setting. Gilks defined Facilitated Mental Imagery (FMI) as a classroom teacher motivating students use of linking mental images during story passages read by the classroom teacher. The use of FMI therefore, enlisted the students conscious linking of mental images with a teacher read story to encourage the learning process (accurate encoding, storage and retrieval/recall of information).

Gilks' [1] indicated FMI to stem from theoretical underpinnings of information processing, cognitive learning, and fuzzy trace theories [2-8]. Systemic information processing involves a student's active integration of incoming and retrieval of known information toward interpretation [1,9]. Fuzzy Trace Theory supports parallel mental representations of verbatim or exact and gist or general information [1,10] and Cognitive and Instruction Theory emphasizes mindful engagement in the learning process or unifying select thoughts throughout transfer and long-term recall and/or retrieval of information [1,11,12].

The Wide Range Assessment of Memory and Learning, Second Edition (WRAML-2, Sheslow and Adams, 2003) Story Memory subtest (Fishing Story and Job Story) was utilized in the pre-posttest design toward examination of a significant difference in core, verbatim, and gist delayed recall raw scores among 4th and 5th grade students who received FMI instruction compared to 4th and 5th grade students who did not receive FMI after controlling for pretest delayed recall scores [1]. A total of 106 4th and 5th grade students that attended a southeast New Hampshire elementary school participated in the study to investigate the effectiveness of FMI toward student achievement based upon research and design.

"All participants in both instruction groups (FMI and No-FMI) received the same WRAML-2 [13] Fishing Story baseline pretest. The core, verbatim, and gist delayed recall scores were respectively totaled for each pretest participant. Prior to the WRAML-2 Job Story post-test, the FMI (treatment) group was provided FMI training, practice, and priming and the No-FMI (control group) was also provided the WRAML-2 Job Story, but without the treatment (FMI training, practice, priming and instruction). The group means for both respective groups (FMI and No-FMI) were compared and examined for difference after controlling for the FMI and No-FMI pretest scores. Both FMI and No-FMI groups listened to the WRAML-2 pretest and posttest stories auditorily delivered by the students typical classroom teacher. The students provided written delayed recall 20 minutes following teacher instruction in both FMI and No-FMI groups. The data was protected using the participants paired symbolic pre-posttest identifiers that did not recognize student-specific identity and the classroom teachers gathered their students written responses which were collected at the end of the school day. The treatment group was identified with a yellow star and the control group was identified with a blue star. All data was assessed and stored at a secured office setting. The independent variable was mode of instruction - FMI and No-FMI; the dependent variables were core, verbatim and gist scores. The unit of analysis was student ([1], pp. 93-94)".

Gilks' [1] research showed the use of FMI in 4th and 5th grade students to improve learning behavior in struggling students. Gilks utilized a one-way Analysis of Covariance (ANCOVA) orthogonal comparisons to analyze and test for a significant difference in the FMI group posttest scores compared to No-FMI posttest scores. Results indicated the lower performing FMI instruction group to show improved WRAML-2 delayed recall raw score performance in all three categories compared to the No-FMI instruction group using the pick-a-point procedure with a posteriori, orthogonal comparisons (Core Delayed Recall, point 1, $F(1, 94) = 10.712$, $p = .001$, and point 10, $F(1, 94) = 12.174$, $p = .001$; Verbatim Delayed Recall, point 1, $F(1, 94) = 11.601$, $p = .001$, and point 3, $F(1, 94) = 6.717$, $p = .011$; and Gist Delayed Recall, point 1, $F(1, 94) = 8.297$, $p = .005$, and at point 4, $F(1,94) = 11.221$, $p = .001$) [1]. However, no significant difference was found in the FMI instruction group and No-FMI instruction group in higher WRAML-2 delayed recall raw score performance in all three categories [1].

Gilks' [1] findings demonstrate the benefits of Facilitated Mental Imagery as a "cost free, learning-to-memory instructional strategy that may be easily implemented within the whole classroom setting toward improved performance in low and moderate learners" ([1], p. 156). The use of FMI improved struggling learners accurate encoding, transfer, and recall of information. Gilks recommends several opportunities for future research and a few include; 1. A mixed-design (qualitative-quantitative) to assess for other strategy use, and/or to ask whether learners and teachers enjoyed the FMI approach and plan to continue to utilize, 2. A follow-up or longitudinal study, and 3. Examination of why FMI had no effect on high learner scores [14]. Gilks also recommends several opportunities for future practice and a few include; 1. Teacher and Counselor use of FMI during auditory lessons for struggling learners, 2. Elementary school districts to use professional development toward skill-based training of FMI, and 3. Shape and replace teacher read with student read text along with subvocalization in middle school toward independent FMI practice [14].

Conclusion

In conclusion, theoretical foundations of Information Processing, Cognitive Learning Theory, and Fuzzy Trace Theory guided and grounded this accomplished study. Gilks' [1] research advanced scientific study through demonstrating lower learner gains with no additional materials, support personnel, or exclusive training. Furthermore, the collaboration of instructional facilitation and student motivation may suggest the modeling of true educational responsibility in the classroom, which includes creative programming that addresses cognitive, social, emotional, and behavioral accountability. Moreover, the developing students' choice of mental representation used with prescribed instruction may encourage practice outside the classroom environment such as in the home and/or community toward continual and systemic learning experiences. Lastly, The FMI approach may deconstruct a lower and higher student expectation or bias, therefore entitling every student to a fair, inspiring, and meaningful learning experience. The significance of this research is extensive because motivating mind-brain behavior via instruction that simultaneously elicits genuine student participation hopes to preserve all students' academic perseverance and build resilience while increasing academic proficiency.

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