

Effectiveness of Information Mapped Training Documents

Introduction

Since 1977, fifteen doctoral level dissertations and several masters level theses have focused on the Information Mapping methodology. As well, many companies have conducted evaluations and implementation research to determine Mapping's effectiveness. There is even research showing that the method applies equally to right and left brain dominant types.

This summarizes the research done on Mapping's effectiveness in training in these areas:

- more accuracy in retrieval
 - improvement in initial learning, and
 - reduction in training time.
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More accuracy in retrieval

In a study of college seniors and graduate students, the same material was presented in a programmed learning version and an Information Mapping version:

students using the Information Mapping version were 32% more accurate in a retrieval test than students using the other version.

(Jonassen & Falk, 1980)

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Improvement in initial learning

Several studies cite improvement in initial learning.

In a study involving administrative and clerical employees at Pacific Bell compared standard training materials with Information Mapped materials:

learners using instructional materials written using Information Mapping scored 38% better on criterion tests as compared with a similar group using standard training materials.

(Webber, 1979)

In a study of 70 student nurses comparing a chapter from a traditional textbook with the same chapter using Information Mapping:

the group of students who used the Information Mapping version scored 22% higher in the competency test.

(Jones, 1986)

Another study involving nursing students compares scores in a 60-item post test of chapters studies.

- *For high SAT score students, the Information Mapping version produced average scores 59% higher than the standard version.*
- *For lower SAT score students, the Information Mapping version produced average scores 53% higher than the standard version.*

(Burrell, 1979)

A study of “lower general ability” college students compared Information Mapping materials to normal prose. Those using the Information Mapping version produced higher scores than the standard test:

- *On facts, the Information Mapping method was better by 32%.*
- *On concepts, the Information Mapping method was better by 41%.*

(Stelnicki, 1980)

A study of 397 high school students learning about hydraulics compared an Information Mapping version of the course with a standard version:

Students who used the Information Mapping version scored significantly higher than students who used the standard training materials, when tested immediately. The Information Mapping method performed 13% - 83% better on achievement.

(Soyster, 1980)

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Reduction in training time

These are the results of assessments in training time.

In the Webber study of administrative and clerical employees at Pacific Bell:

learners using the Information Mapping version took an average of one day in self-paced training mode as compared with two days for the learners using standard training – a 50% improvement in training time.

(Webber, 1979)

The Jones study of nursing students found that

students studying the Information Mapping test (60 minutes or less) received higher mastery scores than did students studying from the traditional test (for more than 60 minutes).

(Jones, 1986)

In a study of adults and children learning mathematics in Brazil:

both adult learners and school children learned significantly more from instructional material written according to the Information Mapping's standards and spent approximately 10% less time than students who used another version.

The results of this experiment (which was conceived as four sub-experiments, each of cross-over design 2x2 square) were, in all four cases, strongly in favour of the Information Mapping format, both in terms of reduced learning time and increased final test score.

(Romiszowski, 1977)

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Citations

The above results are derived from these research studies:

Burrell, Lenetee O. R.N., Ed.D., Medical College of Georgia School of Nursing, Dissertation Abstracts International, 1979 (39 112) 71110A.

Jonassen, David H., School of Education, University of North Carolina at Greensboro and Falk, Insurance Company of North America Mapping and Programming Textual Materials, *Programmed Learning and Educational Technology*, 17 (1), February 1980, P.20-26.

Jones, D.A., Ed.D., R.N., C., F.A.S.N ., Boston University, *The Effects of an Interactive Information Mapping Textbook on mastery Learning of Physical Examination and State Anxiety of Undergraduate Nursing Students*, Boston University, unpublished Ed.D., dissertation, 1986.

Rominszowski, Alexander Joseph, Ph.D., Loughborough University of Technology (U.K.), *A Study of Individualized Systems for Mathematics Instruction at the Post Secondary Levels*, unpublished Ph.D. thesis, June 1977, Looughborough University of Technology (U.K.)

Soyster, Thomas J., Ed.E., Temple University, *A Comparison of the Effects of Programmed Instruction and the Information Mapping Method of Instructional Design on Learning and Retention of Students of Different Mental Abilities*, unpublished Ed.D. dissertation, 1980.

Stelnicki, Michael, Northern Illinois University, *The Effects of Information-Mapped and Standard Text Presentations with Fact and Concept Levels of Learning on Low General Ability Adult Learner Cognition*, unpublished Ed.D. dissertation, May 1980.

Weber, Naomi, Pacific Bell, *Some Results of Using the Information Mapping Writer Service Standards at Pacific Telephone Company* paper given at national conference of the National Society for Performance and Instruction, Washington, DC, April 12, 1979.
