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**Graphic Training Materials: Your Genie in the Lamp**

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## Graphic Training Materials: Your Genie in the Lamp

"Who will exchange old lamps for new lamps," the sorcerer sings out in the classic tale, *Arabian Nights*. An evil sorcerer trades new lamps for old in search of the lamp with the genie. As trainers, we search for the lamp with the power to make training effective. We believe that a popular, time-tested medium is the old lamp we can use to help make training effective. In the United States, we have overlooked using illustrated narrative materials (comic books) for training. Illustrated narrative training materials have the following benefits: 1) they promote learning by capitalizing on the visual dependency of the American public (especially the *X Generation*, those born after 1960); 2) they promote retention by reinforcing the written word with graphic illustrations and with job-related stories; 3) they promote efficient transfer of knowledge to those with limited reading skills and those with limited English comprehension skills (the English-as-a-Second-Language (ESL) reader); and 4) they increase interest and *are read* (often more than once)!

The Japanese have been successfully using graphic texts for education and training for years. *Manga* (comic books) are read not only by the very young but also by university students and even commuters on their way home. In 1992, 10 billion comic books were sold accounting for one-third of the total income for Japanese publishing houses (Kakuchi, 92). It is a popular medium. The contemporary Japanese comic of today is known as the *gekiga*. It was first used as an instructional tool in the 1980s when a *benkyō manga* (study comic) and *jitsumu manga* (practical comic) began to be published. Study comics were developed for mathematics, physics, economics, and multi-volume histories of Japan. (see Figure 1, an



Figure 1: Example Page from an Economics Comic Book  
 Reprinted with permission: JAPAN, INC: INTRODUCTION TO JAPANESE ECONOMICS  
 (THE COMIC BOOK), Shōtarō Ishinonmori, Translated by Betsey Scheiner, © 1988,  
 University of California Press.

example of a Japanese comic book)

In the United States, graphic texts and graphic-oriented media are used extensively everyday. Political cartoons, the "funny pages," and many types of advertising use graphic means to transfer a message. Sea World uses huge graphic murals into the entry of their shark exhibit in Orlando, Florida to describe some of the sea creatures held within the exhibit. Recently, the World Travel & Tourism Council (WTTC) started using a graphic narrative text to fight excessive government taxation of the global tourist industry. A recent *TRAINING Magazine* (Filipczak, 94) article featured a strip artist who is using strips to teach people about organizational, management, and quality issues. The same artist also has a strip that is on the *World Wide Web* that can be accessed with a Web Browser like Mosaic or Cello. Knowing the success of this technology, we investigated the possibilities of using graphic texts for Department of Energy contractor personnel training.

Our organization decided to capitalize on the popularity and appeal of comic books and develop a graphic text that teaches the On-the-Job Training (OJT) process and good practices. We had developed a "traditional" OJT Refresher course and we decided to offer an OJT primer, in the graphic format, for organizations to use in conjunction with the course. We also wanted to use a topic that we could use in a study to see the effectiveness of the use of comic books for training purposes.

We need to take advantage of our society's dependence on visual stimulation evidenced by the rise in popularity of music videos, videos games, computer graphics, etc. and appeal to it in training. It's also true that when properly used, visuals that are text relevant, positively affect learning from the text. In a 1982 study Levie and Lent found that

in 45 of 46 experiments students using illustrated text learn more (36% more on average) than did groups reading non-illustrated text (Williams, 93).

Retention is also increased in other ways. The first step is to promote learning in a manner that it can be retained and retrieved. Readiness to learn is an assumption or a principle that instructional developers should keep in mind. The skillful adult trainer takes care to see that new knowledge is illustrated by life experiences. Malcolm Knowles, author of *The Modern Practice of Adult Education*, stresses the importance of preparing adults to learn. Knowles says that, "People become ready to learn when they experience a need to learn to cope more satisfyingly with real-life tasks or problems." Knowles also notes that, "there are ways to induce readiness to learn through exposure to models." To capitalize on this principle we used incidents (or variations of incidents) from safety reports and bulletins, so that the narratives would be work-related and make the training more credible. Our intention is to make the value of learning the information more evident to the learner and increase retention.

Besides appealing to our society's receptiveness to visual stimulation, the graphic narrative texts meet the need to increase the learner's retention. In Zechmeister and Nyberg's 1982 study, they documented that visuals have a strong impact on the reader's ability to remember the information. No information is useful unless it can be readily recalled (or found). Another bonus of the graphic text is that the learner is reading a story that encapsulates the necessary learning; it is easier to remember information based on a story than without it. Associating knowledge with a story to help remember it has been practiced by many, even before the written word was available.

The graphic text has other benefits. Attitudes can be changed by presenting models and by showing good and bad practices. The comic book presents a vivid picture of those good and bad practices. According to Robert Gagné in *The Conditions of Learning and Theory of Instruction*, to change an attitude the observation of a good or bad effect of the behavior of a human model is vicariously experienced. Graphic texts provide the opportunity for the learner to experience those effects vicariously and therefore change the learner's choice of action.

Another benefit of training comic books is that they can minimize stress about the lack of reading skills and it can make mandated or required training more interesting. No requirement exists for mandated training to be boring; in fact, we as trainers are not doing our jobs if the training is boring. Since most mandated training is safety or health related it benefits us to try to make the training as effective as possible.

The U.S. Department of Labor reports that nearly 23 million adults are functionally illiterate with less than fourth-grade reading skills. Twenty-five percent of the illiterate population are immigrants who may just be learning to speak English. Nearly 35 million adults are semi-literate, reading below an eighth-grade level. Workplace literacy is an important issue for us today. If an employee does not have the required level of reading, arithmetic, problem-solving skills, and generally improper work related attitudes, the employee may be considered workplace illiterate. In the Americans With Disabilities Act of 1990, congress reports that "some 43,000,000 Americans have one or more physical or mental disabilities, and the number is increasing as the population as a whole is growing

older." An organization which includes those with disabilities (in accordance with the ADA) is required to make reasonable accommodations for such people. According to the ADA, reasonable accommodations made in the training arena include such actions as "appropriate adjustment or modifications of examinations, training materials, or policies, the provision of qualified readers or interpreters, and other similar accommodations for individuals with disabilities." Graphic texts could be developed as "reasonable accommodations" for those with learning disabilities and for those who may be lacking workplace literacy skills.

According to Jerry Jaffe in the article "Workplace Literacy in the Local Public Sector," June 22, 1992, a need exists for different approaches to meet the needs of the future workforce composition which will consist to a large extent of people with limited reading skills and immigrants with limited English proficiency. Interpretive pictures are intended to clarify hard-to-understand text. In this age of concern for diversity, comic books are also effective as ESL training tools, since the visuals compensate for limited reading or interpretive skills.

Training comic books are a cost effective and efficient alternative or supplement to traditional methods. If necessary, self-checks and/or quizzes can be added to the text so that the training can become self-contained. Instructor-free training is cost effective and is another benefit of using a graphic text as training material. Comic books can be used for initial training, refresher training, just-in-time training, individualized training, stand-alone training, case studies and support material for classroom training.

One can create the most information-packed reference in existence, however, if the intended audience will not open the book, it is useless. People readily open the graphic text and read it because it is visually appealing. Many of the texts used in technical

training are so tedious and boring. Using graphic texts as a learning medium is an exciting way to capture the intended audience visually and engage the trainees mentally to affect behavior and attitude changes.

The power of the time-tested graphic narrative in training has yet to be tried in the United States. Through the use of comic books in technical training we expect to achieve: increased learning by capitalizing on the visual dependency of the American public, increased retention by reinforcing the written word with graphic illustrations and with job-related stories, increased knowledge transfer to the low-literacy reader and the ESL reader, and increased interest and opportunities for the training materials to be read, especially on required safety- and health-related subjects.



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