

## Iconography: Using Appropriate Technology for Teaching Career Development Concepts

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Iconography lives within an extended family. One cousin is the research surrounding learning styles and multiple intelligences; another is what researchers are discovering about intergenerational differences regarding the use of technology; still another is the world of art therapy. We adopted the term *iconography* after observing how the use of computer images, i.e., icons, enhanced student interest when we taught concepts related to Super's cycling and recycling of career development stages. Iconography is here further defined as the graphic portrayal of one's life, hopes, and dreams through selection of computer-generated images.

Although the focus of this article is on the use of iconography to teach career development concepts, there are many other places in the counselor education curriculum where iconography can be put to good use. Further, as is addressed later in this article, when we used icons to teach concepts, students on their own volition opted to use computer-generated icons to represent stages of their career development. Iconography became not only a format to enhance learning within the classroom, but a means for students to complete assignments in a meaningful manner.

### Learning Styles and Multiple Intelligences Cousins

Learning styles fall into the general categories of *perceptual modality*, *information processing*, and *personality patterns*. These categories help educators design instructional strategies that are appropriate for the types of learning styles that appear in counselor education classrooms. Perceptual modalities refer to the biologically based reactions to the way we most efficiently adopt data. Information processing is the distinct way we have of perceiving, organizing, and retaining information. Personality patterns focus on attention, emotion, and values. The counselor educator is concerned with all three of these categories of learning styles, but it is the perceptual modality category that is the subject of this article.

How do learners take in information? Studies of perceptual modality have identified four basic styles: auditory, visual, kinesthetic, and tactile (Clark, 2000, paragraph 6). Auditory learners are best taught through verbal lectures, discussions, talking things through, and listening to what others have to say. Visual learners think in pictures. They benefit from handouts, charts, pictures, graphics, outlines, and, yes, icons. The kinesthetic learner will learn most effectively when the learning process actively engages the body. The tactile learner will learn most effectively when the learning process activates the sense of touch. While each individual may favor a given style, there is usually significant overlap in learning methods. No one uses only one learning style.

Howard Gardner (1993) established another way of grouping modalities. He asserted there are at least seven modalities or intelligences that link to our individual styles: (a) verbal-linguistic (sensitive to the meaning and order of words), (b) musical (sensitive to pitch, melody, rhythm, and tone), (c) logical-mathematical (able to handle chains of reasoning and recognize patterns and order), (d) spatial (perceive the world accurately and try to re-create or transform aspects of that world), (e) bodily-kinesthetic (able to use the body skillfully and handle objects adroitly), (f) interpersonal (understand people and relationships), and (g) intrapersonal (possess access to one's emotional life as a means to understand oneself and others).

It is likely that iconography has the most meaning for individuals with visual and kinesthetic/tactile learning styles, and bodily-kinesthetic and intrapersonal multiple intelligences. But another cousin of iconography also needs to be invited to the family gathering. What do we know about the use of technology and intergenerational differences?

### Intergenerational Differences Cousins

Rosen (2004) indicated that we are in the midst of four generations: the silent generation includes those born before 1946; baby boomers were born between

1946 and 1964; Generation X members were born between 1965 and 1980; and the Net Generation was born after 1980. He further indicated that these generations differ in the way they use technology. “Boomers learned technology after their schooling and prefer face-to-face process-oriented meetings. Gen Xers are results oriented, grew up with technology, and prefer electronic communications. Boomers like routines; Xers like spontaneity” (p. 18). It is the Net Generation, however, that we are currently facing in counselor education classrooms. Many began using technology by age 3, live on instant messaging and multi-tasking, and get bored easily. They get impatient if counselor educators don’t value their use of technology in completing assignments.

Further, Rosen (2004) indicated that the generations also differ in their learning styles. “Boomers are auditory and visual learners while Xers and Net Geners are tactile learners. When boomers get a new gadget their first step is to read the manual. The younger generations just start hooking up wires and pressing buttons” (p. 18). The case for iconography grows.

### Art Therapy Cousins

The use of icons to represent stages of career development is also related to art therapy. Art therapy practitioners provide clients with the tools needed to produce paintings, drawings, sculptures, and other types of artwork. The focus of art therapy is not on art skills or aesthetics; rather the art that is produced is examined to see what it represents for the client (“Art Therapy,” 2000). Clients with an eating disorder may be asked to create an image of themselves, and through this medium they are able to express feelings that may have not flowed so freely prior to the use of art therapy techniques.

The emergence of easy-to-access free computer graphics offers another format for self-expression. Further, it meshes nicely with this Net Generation of technology savvy, tactile, and often impatient learners who are presenting themselves for instruction in today’s university classrooms.

### Family Conference

The learning styles cousins, multiple intelligences cousins, intergenerational technology differences cousins, and the art therapy cousins form a family system that leads to the use of iconography as a viable teaching technique. Peterson (in press) has described how iconography can be used to teach students the concepts underlying Donald Super’s cycling and recycling of career development stages.

In brief, here are the procedures. First, we place Super’s career development stages and ages in a matrix that is created in Word and that follows. Then, students download the matrix from the World Wide Web, look for computer graphics (icons) that represent a cell in the matrix, and write an interpretation of why they chose each icon and what it represents in terms of their career development.

### EVOLUTION OF SUPER’S THEORY . . . INTO CYCLING AND RECYCLING OF DEVELOPMENTAL TASKS THROUGHOUT THE LIFESPAN

Look at Super’s definition of Vocational Developmental Tasks in your textbook. Examine your life and project for future life stages by giving an example of a developmental task for each cell of the matrix.

Age →		Early	Middle	Late
Stage ↓	Adolescence	Adulthood 22-45	Adulthood 45-65	Adulthood Over 65
Disengage.				
Maint.				
Establish.				
Explor.				
Growth				

Originally, students completed the “Super” assignment by writing phrases in the cells after we showed them a PowerPoint presentation using the same matrix. However, in the PowerPoint presentations we used graphics. When the students saw the neat, symbol-laden matrix that emerged, it was their suggestion that we revise the assignment so they, too, could find icons that represented their career development.

### “Net” Results: A Dysfunctional or Functional Family?

Innovations, although appealing, do not necessarily result in learning. The effectiveness of iconography could be tested in a true experimental design using experimental and control groups. This step still awaits. However, observations revealed a variety

of things when students created the Super matrix with icons. Their written explanations and interpretations of each stage were more insightful and more detailed. They really wanted to talk about and show their matrix in class. Several told us that the most valuable part of the assignment was finding icons that represented projections of what they would like to be doing when they are 45 and 65 years old. They thought about the future more when they went looking for just the right icon.

Another point of interest is the icons of people who students chose to include in their matrix. We saw and heard about Oprah, Donald Trump, and Rev. Billy Graham—to name a few. Not everyone chose to include a person, but those who did provided a profile of persons that have some type of meaning for today's Net Generation.

A serendipitous outcome also emerged. The overuse and uninspiring use of PowerPoint presentations is rampant in today's university classrooms. PowerPoint presentations often look like overhead transparencies with fancy borders. The full capabilities of PowerPoint for supporting lectures are often not being exploited. Even if animation and sound are used, they are frequently used just because it is possible to do so rather than for their appropriateness to teach the concepts under consideration.

In summary, the Super matrix was a natural for using movement and graphics to insert icons into the matrix and to appeal to the learners who are in today's counselor education classrooms. However, iconography need not be limited to instructor and student use for understanding Super's cycling and recycling of career development stages. When discussing social cognitive career theory we have used iconography to teach the notion that outgrowths of personally reinforced parts of an activity affect our outcome expectations. We use an icon of an artist's palette, followed by a smiling face, followed by a repeat of the palette to represent "I paint. I get praise. I feel good about it. I paint again." Students are asked to select icons that represent something that they do because of reinforcement they have received. Students can also select icons that represent the six personality types on Holland's hexagon. The family of iconographic techniques is growing and seems to be functional. Now the task is to measure learning outcomes.

## References

- Art therapy*. (2000). Retrieved December 12, 2004, from [http://www.wholehealthmd.com/refshelf/substances\\_view/0,1525,671,00.html](http://www.wholehealthmd.com/refshelf/substances_view/0,1525,671,00.html)
- Clark, D. (2000). *Learning styles*. Retrieved December 12, 2004, from <http://www.nwlink.com/~donclark/hrd/learning/styles.html>
- Gardner, H. (1993). *Frames of mind: The theory of multiple intelligences* (10th anniversary ed.). New York: Basic Books.
- Peterson, M. (in press). Super teaching or teaching Super? In M. Pope & C. W. Minor (Eds.), *Experiential activities for teaching career classes and for facilitating career groups* (Vol. 2). Tulsa: National Career Development Association.
- Rosen, L. D. (2004, March/April). Understanding the technological generation gap. *The National Psychologist*, 13(2), 18.