Foreword

The deeper one gets into educational theory and pedagogical techniques the more one needs to remember the importance of the simple statement “a picture is worth a thousand words.” The power of this saying isn’t just that in many situations a picture is actually worth a thousand words of explanation, it’s that in many situations a picture (or a visual) is worth way more than thousands of words could ever be. In many cases, the graphic conveys and explains things in a way that words simply cannot fully express. Sometimes it is an emotional description, but in the educational world, many times it is the ability to explain a complex concept or process that remains abstract until, via pictures, animation, video, etc., the student can better mentally represent it.

Aside from various notions of learning styles or teaching styles, visuals can add to the whole experience of the learning event by making the subject matter more realistic and exciting, which leads to improved motivation to learn in general. Visuals with respect to e-learning are of particular importance in that instruction and learning is accomplished via means other than personal or physical interaction. With constantly improving technology and connectivity, the use of visuals should be continually re-evaluated so as to maximize their capability to enhance instruction and learning whenever possible.

The famous Chinese proverb (Confucius 551-479 BC) “I hear and I forget; I see and I remember; I do and I understand,” really brings the importance of visuals to light. Modern research continues to move beyond the understanding that relevant images presented with text does produce an illustrative effect that generally enhances comprehension and learning. Current research is now focusing more on what types of visuals work best and in what circumstances. Many other considerations must also be looked at such as the student’s ability to comprehend the visuals, prior learning (knowledge base), the ability to acquire or create the visuals, how the visuals will be accessed and used by the student, as well as the subject matter itself. With carefully selected and utilized visuals in place, the facilitation of higher order processing and connections occurs so that the information learned moves beyond short term memory or “learning for now,” into long term memory and true understanding.

Newer visual technologies are allowing the student to actually be part of the process in a more active and dynamic use of visuals. Immersive environments and choice-directed videos are allowing students to explore more possibilities dealing with the subject matter. Technologies such as Linden Lab’s Second Life™ (SL) and other virtual reality engines are taking the concept of visuals to a completely new level. “I do and I understand,” is now actually being accomplished with visuals, through the use of avatars and virtual worlds with unlimited educational possibilities.

As an electronic media coordinator, I have personally worked with the author in the digitization, creation and manipulation of many types of visuals to be used by professors. I have personally observed that many times a professor has a sense that it is important to have the same visuals as used in on-campus courses but doesn’t understand how to best translate it into an e-learning environment. One answer isn’t
always the best answer in that different situations call for different solutions. Sometimes a high-resolution photograph is better than video; sometimes, it isn’t. Sometimes a video is better than a Flash simulation, sometimes it isn’t. Sometimes, a fully immersive virtual environment would be overkill when a simple diagram would do. Additionally, as an instructor in the military, I have seen how sometimes concepts are not understood by soldiers until a step back is taken, so that soldiers can visualize the whole picture instead of just one specific component. Digital graphics such as those explained in this book were used to improve understanding and performance. Knowing that the use of visuals is of great benefit is only part of fully understanding the concept of the proper use of visuals in education as a whole.

This book brings to light many important aspects of visuals. Vital answers to the questions of why, how and where to use visuals will be presented so that the true value of different types of graphics can be utilized. The information contained within this book will show that although the development and selection of instructional materials is generally done towards the end of the instructional design process, it must be viewed in a more inclusive way in that the visuals themselves may affect many other components of the educational design. The type, quality and degree of visuals used can affect everything from how the course will be conducted to how the assessments will be done. This informative book will guide you in understanding visuals and properly incorporating them within your educational presentations and endeavors.

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