Sometimes, whether an e-Learning application works or not comes down to whether the designer did or did not do some very simple and very basic things. None of these things has much to do with technology, and all of them have very much to do with the human beings who use the application. This week, you will discover three simple principles, applied in the opening elements of an e-Learning program, that will get your learners off to a great start, and that will motivate them to complete the program.

Learners make split-second judgments about your course, and first impressions are lasting impressions which are virtually irreversible. You should look at your course and lesson openings as if you were meeting someone for the first time. There is always the possibility that you’ll be meeting someone already biased against you. Fierce competition for the other person’s attention complicates your situation. How you’ll measure up to their expectations in the first few minutes will make the difference between a great start and no start at all.

In an e-Learning application the learners are the other person and you, the designer, are the one who has to make the good impression. The other per-
son’s biases are the learner’s preconceived notions about computer-based training, and the competition is the myriad tasks clamoring for the learner’s time and attention. Your course’s introductory material can be the beginning to a great learning experience, or the starting signal for an Olympic mouse clicking event.

To ensure your introduction to e-Learning is a positive one, there are three design principles that every course and lesson should address: directing learners’ attention, gaining learners’ interest, and preparing learners to learn.

**Greeting the learner and directing attention**

First impressions rest in large part on appearances. When we encounter other humans for the first time, we notice such things as race, height, weight, clothing, facial features, and hair color. In face-to-face communications your appearance and demeanor are the signals that lead to a first impression. In the e-Learning world it is going to be your introductory content. Good screen design practices (fonts, color, navigation, and graphics) are the tools that can help you to accomplish a pleasing and acceptable appearance. After appearances, two important aspects of the introductory material are essential to making a positive impression with your potential learners: directing the learner’s attention to what is important, and making the learner’s acquaintance.

**Gaining and directing attention**

The reality of our busy multi-tasking lives is that you’re competing for a learner’s attention. If your e-Learning environment is similar to mine, it’s the same computer that’s on my desk loaded with tasks beckoning me to work on them. Most likely, the e-Learning course material appears on only one of my dual screens, with e-mail up on the other. The learner is adjacent to a phone; probably the one that is blue-toothed to the learner’s ear. In this competition you’ll need all the edge you can get; and a good design can give it to you.

Gaining a learner’s attention is probably the most ephemeral thing that happens at the beginning of a learning event. The goal of gaining a learner’s attention should happen in such a way that learners easily forget about the medium and become engrossed in the message. Smith and Ragan (1993) put it this way, “The major concern of designers is that they include enough stimulation to draw the student’s attention to the learning task, but not so much stimulation that the student’s attention is directed only toward the attention-directing device and distracted from the learning task.” Knowing learners make split-second judgments about your course, and first impressions are lasting impressions that are virtually irreversible. You should look at your course and lesson openings as if you were meeting someone for the first time.
that the learners’ attention is drawn to the parts of the screen that stand in contrast to the others is the key to directing the learners’ attention. Contrast can be achieved in variations of brightness, color, size, shape, type style, and motion. An acid test for a successful attention-getting design is that when a learner is distracted (and every learner will be), the learner can come back to the screen and, with little effort, find the important material.

In Figure 1, notice how the word “Welcome” stands out in large, bolded text in contrast to the other information on the screen in the upper-left area. As kind of a bonus, in Western cultures that is the generally the first area we will focus on. This word, “Welcome,” was probably the first thing you noticed when looking at the figure. Further, the screen also contains two sets of italicized text indicating the salient message on the screen. Try the test. Look away for a few moments and then look back at the screen shot. Was it easy for you to find the italicized text?

Here are some “do’s and don’ts” for gaining and directing attention.

**DO:**
- Use sound, boxes, graphics (static or animated), arrows, or changes in text (font, boldfacing, underlining, and italics) to create a contrast to focus on the learning task.
- Keep variations in fonts to a maximum of three.
- Use multimedia methods, such as alterations in perspective, panning, zooming, and irising, in moderation.
- Use variations in color sparingly.
- Exclude extraneous material.

**DON’T:**
- Spend a lot of resources on bells and whistles that don’t support learning.
- Overuse the same contrast scheme or it will lose its effectiveness.

**Greetings and felicitations**

Because meeting your learners in the e-Learning world should be just like meeting someone in everyday life, the first thing that should happen is a greeting. When you meet another person for the first time there is a short social process (etiquette) of a greeting. “Hi! I’m (your name). How are you? (Wait for reply)” or “Welcome! Glad you could make it!” Except in cases of an emergency, a greeting usually takes

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**Figure 1**

Blood Borne Pathogens Welcome Screen (Used with permission of Fluor Hanford Co. Richland, WA)
place before you jump into the subject of the moment. Greetings are so essential that some experts recommend using a portion of precious class time (in classroom instruction) to greet the students as they enter the room. The general rule of thumb is the first 15 minutes of class time is for interacting with the participants. The same etiquette applies when someone enters your cyberworld classroom for the first time.

There is a range of ways to greet a learner. Greetings can be both audible and physical. The simplest form is a “Welcome!” such as the one given by on-screen coach Dr. Laurie in Figure 1. A little more challenging is a balloon greeting from an onscreen coach using the learner’s name. With a little programming magic, you can access the time from the computer and convert it into a: “Good ___________ (!) (Fill in the blank with whatever time of day it is; morning, afternoon, evening, or what are you doing up at this time of day?)! If you want to be really creative the ultimate might be offering a greeting (including the learner’s name) from an animated avatar.

Here are some tips for greetings.

**DO:**
- Make the greeting first.
- Use the learner’s name when practical, while being culturally sensitive. Keep in mind, as with many forms of communication, greeting habits are highly culture- and situation-specific and may change within a culture, depending on social status and relationship.

**DON’T:**
- Use a learner’s identification number in the greeting.

A greeting may seem trivial, but it is worth the effort. “Research on discourse processing shows that people work harder to understand materials when they feel they are in a conversation with a partner rather than simply receiving information.” (Clark & Mayer, 2003). Including a greeting is the first step in establishing a partnership.

### Gaining learners’ interest

Gaining a learner’s attention is not the same as encouraging interest. Attention is of short duration and it may not be infused with desire or emotion, but it should, at least, open the way to interest. Interest relates to motivation. A learner’s motivation to exert effort toward a goal is based on his or her perception of associations between actions and outcomes. You can gain a learner’s interest by illustrating the relevance of what he or she can accomplish through your course, or by incorporating an interest-gaining strategy.

### Relevance

When faced with an event that infers action and
sustained energy, learners will evaluate the situation to determine whether it is worth the effort. Bob Pike (1994) puts it this way, “... people are tuned to the radio station WII-FM: What’s In It for Me.” In order to broadcast on the right frequency with your learners you need to establish a link between the skills they will obtain through your course and how those skills can be of value to them.

You can establish relevance to learners by:

- Stating explicitly how the instruction builds on the learner’s skills.
- Find out what the learner’s interests are, and relate them to the instruction.
- Connect the skills they will learn to future goals.
- Include a video of an alumnus of the course giving testimony on the value of the skills he or she learned from your course.

The example in Figure 2 explains the importance of being able to understand the meaning of the terms used in a hearing test. It relates the terms of a common blood pressure test to the future skills of being able to comprehend the result of a hearing test.

**Strategies for gaining interest**

The potential of computer-based media for encouraging interest is one area where e-Learning can really shine. It’s kind of like popcorn and microwaves. Everything you desire comes in a small packet. Just pop it in the microwave and in a couple of minutes you have a self-contained, good-smelling treat. Likewise if you overdo it in the microwave by even a relatively short amount of time, you end up with a pungent-smelling bag of unwanted goop.

John Keller (1987) describes several interest-provoking strategies, three of which can encourage interest if you incorporate them at the beginning of a course or lesson: incongruity and conflict, concreteness, and inquiry.

You can present incongruity and conflict by using the strengths of the computer’s ability to provide a multimedia experience. You can use video and animation to introduce facts that seem to contradict the learner’s past experience. You can show impossible scenes by altering place and time. You can morph objects into relevant content by presenting an example that does not seem to apply, but which actually illustrates a given concept. Split the screen to introduce two equally-credible facts or principles of which only one can be true.

You can best implement concreteness by using pictures. This is the one time in an e-Learning environment where it is appropriate to use pictures for their decorative function. That is, where the intent of the picture is basically for aesthetic appeal, or to trigger an emotional response. It is best to show a visual representation of an important object, set of ideas, or relationships. One method is to use a progressive disclosure. You can achieve progressive disclosure by sequentially adding information to a picture. Use video or animation, or adjust the size of a “mask” until the final picture is exposed.

Inquiry may be included within your introductory material simply by asking a question. The question should connect a learning goal to a role or responsibility that the learner will be expected to perform. Another way to include inquiry, when not constrained by having to present material sequentially, is to allow the learner an opportunity to select topics.

Figure 3 combines an introductory question (inquiry) and a slowly developing slide show that presents pictures (concreteness) of an ambulance, an accident scene, and then progresses to management involvement in an investigation. The screen contains an audio track which plays over the pictures.
Here are my tips for gaining interest.

DO:
• Keep the content related to the topic.
• When using multimedia, ensure the content is redundant and related.
• Incorporate pictures that include people (co-workers if possible).
• Use pictures that are novel or dramatic.
• Minimize animated text.

DON’T:
• Overload learners with too much information.
• Confuse learners with unrelated context.
• Use pictures containing too many elements so it is difficult to interpret.

Gaining learners’ interest is a bit like being a salesperson. You need to combine a bit of flash while being able to express the value of your product to your potential customers in terms of their desires. Knowing the value of your course, and how it applies to current or future needs, is how learners will make the connections between the action (taking your course) and future outcomes, thus providing a climate for the learners to be self-motivated.

Preparing the learner to learn

When it comes to learning, the brain is very much like a muscle. In order to get optimum performance, you need to warm up and stretch your muscles. An effective warm-up includes movements that increase your heart rate and breathing, and slightly increases the temperature of your muscles. In a similar way you can help the brain warm up by sharing the learning objectives, advertising upcoming events, and activating previous knowledge.

Sharing learning objectives

Beginning a course or lesson without knowing the objectives is like starting out on a trip without knowing the destination. There is no way to plan for the journey. One way to pave the path to successful learning is to share the course and lesson’s learning expectations. You can establish the expectations by sharing the learning objectives. Since relevance is the “What’s in it for me?”, objectives are the “How will I come to achieve the valuable skills and knowledge available within this course?”

There are several reasons to share the learning objectives. Knowing the objectives can establish expectancy in learners, and arouse their interest. In addition, giving learners a clear idea of what they are to achieve allows them to connect with prior content and general world knowledge. Connecting to what the learner already knows provides a foundation for the course’s subject matter. Further, sharing the course’s learning objectives opens the door for selection of learning strategies, and gives learners a metric so they can judge when they need to seek help or clarification.

Referred to by many names (performance, instructional, behavioral), the basic learning objective is a statement of a behavior the learners will be expected to do, the conditions under which the behavior will be performed, and a standard of achievement.

Learning objectives are a tool. That is, like most tools, learning objectives come in various forms that are usable for different reasons. Although providing precision for an instruction designer, Gagne’s five-component format (situation, object, learned capability verb, tools, constraints or special conditions) is rarely appropriate for expressing the objectives to the learners. Objectives that are too detailed, and that use terms and concepts that they haven’t learned yet, can interfere with learning. You should convert formal objectives by applying the Personalization Principle (Clark & Mayer, 2003). Use a more conversational style and weave them into practical application.

For an example, refer to the first bulleted learning objective in Figure 4, taken from a Blood Borne Pathogens course.

The learning objective for use by an instructional designer (Gagne form) would read: “When asked to tell what the risks associated with blood borne pathogens are, the learner will assert orally the risks associated with exposure to blood borne pathogens with reference to the definition of a blood borne pathogen.”

Converting the objective to a form appropriate to the learner by applying the Personalization Principle resulted in: “At the end of this lesson you should be able to explain to a friend why it is important to be knowledgeable about blood borne pathogens.”

Please note: Chronologically, the Welcome screen in Figure 1 would come prior to the Learning Goals screen because it contains the definition of a pathogen. It is essential that learners have knowledge of the terms used when presenting goals and objectives.
Upcoming events

A strategic element of surprise is a desirable and important tactic in modern warfare when your goal is to destroy an enemy. When learning is the goal, however, you are better off to avoid surprises so learners can be prepared for the upcoming learning event.

Preparing the learner for upcoming events is relatively easy to accomplish. Just tell them. You’re exposed to this tactic all the time via radio, newspapers, and television. A radio announcer will explain what the songs in the next segment are going to be, “Right after these messages from our sponsors.” At the top or bottom of the front page of a newspaper are vignettes of major stories in the following sections. News anchors let you know what stories they will cover in the next half hour. In the learning arena you tell the learner what is coming up, at the beginning of a course, at the beginning of each section, and at the completion of each lesson within a section.

An example of laying out the content of a lesson appears in the lower portion of Figure 5. The lesson content outline explains that the topic will appear in a bottom up approach (an organizing strategy), followed by practical exercises.

Activating previous knowledge

For all practical purposes learning is the combining of new information and ideas with what learners already know. A bridging strategy is what connects something already known with something new. The bridging strategy that most lends itself to e-Learning is the analogy. You base an analogy on the similarity between two things, which you can compare. For example, the heart is like a pump. The known concept, pump (sometimes called the analog, or vehicle) is compared to what is to be learned (the subject) through a connector (an “is like” phrase).

Now you could use an analogy as simple as the one above, but for helping people to learn, that’s like building half a bridge. To ensure that learners make the connection, it’s important to provide the learner with the similarities and differences between the concepts being compared (sometimes called a ground). For an example, refer to the beginning content in Figure 5 which compares a type of scaffolding (tube and coupling) to Tinkertoys®. Then the similarities of the scaffold’s qualities and components are specifically matched with components of Tinkertoys and their functions (tubes are like the sticks and couplings are like connecting wheels).

Here are some tips for preparing the learner.

DO:

• Let the learner know what’s coming.
• Share the objectives at an appropriate level for the learner.

DON’T:

• Surprise learners. It deprives learners from recalling relevant information and learning strategies.
• Use terms in objectives that the learners haven’t learned yet.

Just as a coach prepping a team for a game would ensure the players know the game plan, and warm up prior to the start of a competition, a good beginning of an e-Learning course can prep learners by sharing the learning objectives, informing learners of upcoming events, and helping them to recall previous knowledge.

Is it worth the effort?

Most likely, if you included the three design principles discussed in this article, all three would take effect within the first minute or two of your e-Learning course. You may even think, “This is much ado about nothing.” But, having a good beginning is like building a house on a strong foundation. When the winds of distraction, or maybe even the quakes of tiredness and boredom strike, the interest and value you present in the beginning of a course and lessons will help the learner to weather through. I think Michael Allen (2003) puts it succinctly: “Excellence in e-Learning comes not from the fact that it employs technology for delivery, but rather from how e-Learning uses available media and the purposes to which it applies them.” A good beginning is a worthy purpose.

References


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