

Applying Adult Learning Principles to E-Learning: A Zipline Performance Group White Paper

Adults aren't just grown-up children, and e-learning programs for adults should not simply borrow techniques developed with young people in mind. But many e-learning programs today don't try to understand how adults learn, in order to help them learn better: No reasons are given as to why the course is required, no learning objectives are provided in advance, little time is spent identifying what the learner already knows or has experience in, memorizing facts and figures is more important than solving real problems, there is minimal or no interactivity in the course, and there is absolutely no feedback for the knowledge demonstrated or skills performed until right after completing the final exam.

However, when rationales for learners are stated, learning objectives are provided, content relates to the learner's experience, problem-solving exercises and interactivity are common, and feedback is frequent and immediate, the program connects more closely with the principles of adult learning.

The Principles of Adult Learning

Although it's been around for centuries, adult learning theory has been fine-tuned since the late 1960s, when it was popularized by American adult learning pioneer Malcolm Knowles. He and his followers produced a series of assumptions or principles about how adults learn ("andragogy") differently from how children learn ("pedagogy"). The general principles of andragogy include the following:

- 1) Adults must be **motivated** and develop a **relevant, personal need** to know why they must learn.
- 2) Adults are autonomous and prefer to be **self-directed**, pursuing only what they need to learn in informal, non-threatening learning environments.
- 3) Adults must connect their learning with their current **experiences** and be able to practice new skills.
- 4) Adults must be able to engage in **self-reflection** after completing a learning experience and before practicing on their own.
- 5) Adults must be **actively involved** in their learning, not just passively listening.
- 6) Adults rely on one or more of their **senses** as their preferred mode of learning (visual, auditory or kinesthetic/touch).
- 7) Adults must **master** what they have learned and then **transfer** that knowledge immediately.
- 8) Adults must feel **respected** and supported, and they must be treated as equals in learning.
- 9) Adults must receive regular **feedback** and positive reinforcement on their progress.

The implication of these principles is that certain instructional designs produce more effective learning outcomes for adults than other designs. For example, adults crave programs that offer the possibility of experimentation and creativity. Learning should also be as task-centered as possible, giving adults the ability to solve problems that they frequently face in their lives, to realize their goals and to bring about change for their own needs. In addition, the learning program should also adapt to the limitations of aging.

Learning the Adult Way

Organizations regularly need to provide mandatory training sessions on policies, procedures, job skills, preventive behaviors and so on. However, there are other ways to teach these requirements than implementing a one-size-fits-all-ages training program. Applying the principles of adult learning theory into course development can help employees to learn faster and more effectively as well as to retain their newly gained knowledge for a longer period. It also capitalizes on the adult's interest in the learning experience.

For a number of reasons, not every e-learning program for adults follows adult learning principles. Some trainers simply aren't aware of them or don't know how to implement them successfully in an e-learning

course. Moreover, it requires a higher degree of creativity and insight to provide curriculum in a challenging and interactive manner; therefore, it takes more time and money to develop than the deadline and budget might allow. In addition, incorporating the principles into training must be done before an online course is developed, and an organization might already have a legacy program available that doesn't follow adult learning principles.

Most adults will move quickly through the modules of an e-learning course, and they may do well on the final exam. But unless the instruction follows many of the key adult learning principles, over time they may gradually forget what they've learned. The real goal of applying these principles is not to make training easier for adults (although it can make training seem almost painless) or more enjoyable (although it will likely have that effect). Instead, the principles should be implemented to maximize the effectiveness of the online experience so that adults actually succeed in learning the knowledge and skills and retain them longer.

E-learning courses for adults that do not incorporate the principles can and do succeed. However, they do not take into account the unique learning needs of adults and sometimes fall short in ensuring utmost performance. First, adults have a wealth of experience to draw from (and may actually know more about the subject matter than they learn in the course). Second, adults learn best when they can solve problems or think about decisions to make in real-life scenarios. Third, adults believe they're getting sufficient value from their training time if they can:

- 1) master knowledge that is relevant, as well as challenging, to them;
- 2) always feel certain about their progress;
- 3) provide input into the direction of their learning;
- 4) seek out opportunities to direct their own learning; and
- 5) put their new knowledge to practical use immediately.

Adult Learning and E-Learning

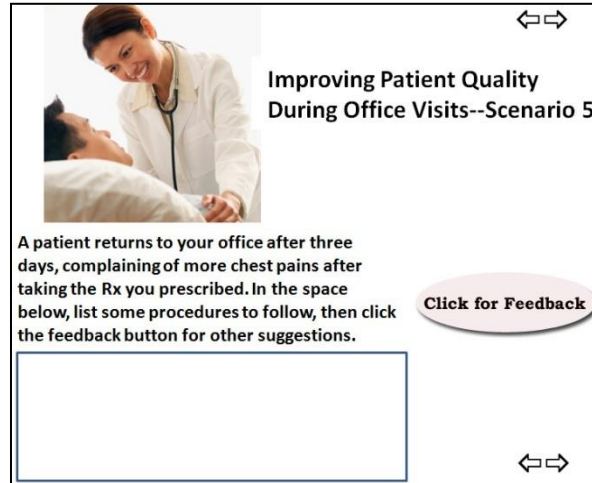
Adult learning principles are transparent to the delivery platform. They can be readily applied in instructor-led training, primarily through the use of role-playing, informal discussions and self-directed learning. However, adults can often achieve an even higher degree of retention and long-term performance with an e-learning course designed with adult learning principles. Not every adult is alike, and individual adults differ in their learning needs. E-learning accommodates these unique needs. In many cases, adults can advance through an e-learning course at their own pace or , to fit their work schedule and suit their personal learning requirements.

E-learning also expands opportunities for an adult to be fully engaged in what they're learning. Adults are normally interactive while on the Web, whether Google-ing the name of a friend, clicking on a journal article to read, or playing an online game. These and other activities can be transferred to the e-learning environment, such as downloading PDF documents or entering a 3D virtual world to seek answers to an avatar's dilemma.

An e-learning course can tap into the need for self-direction by letting learners choose, in a nonlinear fashion, the first of several learning modules to begin, then routing back after that module's exam to choose the next module—until all modules have been completed. After each module, the learner can click on further training links to be studied later as time allows and the need arises.

Because adults learn best by doing, the online environment is suited for presenting a scenario to solve or analyze. Instead of always dispensing the exact content they need to learn, a screen can introduce a scenario, such as an common situation that a learner may confront on the job, and ask what to do. In addition, immediate feedback in the form of suggestions can be provided on the completion of an exercise, as shown

in the example below. After typing in procedures in the space provided, the learner can click on the feedback button to open a list of suggestions that might validate, expand upon or move in a new direction from what the learner already knows. This automatic feedback provides positive reinforcement and does not penalize for wrong answers.



Improving Patient Quality
During Office Visits--Scenario 5

A patient returns to your office after three days, complaining of more chest pains after taking the Rx you prescribed. In the space below, list some procedures to follow, then click the feedback button for other suggestions.

Click for Feedback

Designing E-Learning with Adult Learning Principles

As we've seen, an e-learning course offers numerous opportunities to apply adult learning principles. By recognizing the various conditions in which adults learn best, a designer can make the course more valuable to adult learners. The statement "management has made this training mandatory for everyone in the company" does practically nothing to motivate adults to retain what they should learn. Instead, the course must state the desired skills and knowledge outcomes in the objectives and then relate them to the learner's experience and position in the organization.

Upon beginning the course, adults must understand what are the learning objectives as well as how the training is necessary for their job. Fulfilling this principle satisfies their need to know why they must learn, offers them motivation for learning what is expected of them, and appeals to their personal need to learn based on their current life situation. For example: "After finishing the course, the student should be able to enter a new product into the inventory tracking system in less than three minutes" or "The student should be able to apply 10 common practices to improve the quality of a patient's visit."

To increase retention, any course that follows adult learning principles must provide review questions and/or practice exercises after every few screens, instead of just at the end of the module. In addition, the course must connect learning to the real experiences of learners. The course should include "what if" exercises so learners can apply what they already know, find out what they should (and don't) know and practice what they have just learned. With relatively inexpensive design software, a course designer can create simple but effective simulations that approximate a task to be learned.

For example, a course designed for legal professionals can include situations that they face every day to help them learn how to improve their skills; in other words, knowledge that can be applied immediately to their practice. As much as possible, learning activities should adequately correlate to a learner's *level* of experience: A new-hire should not be expected to have a 20-year veteran's knowledge and skills, nor should a veteran have to revert to the knowledge and skills of the new-hire.

To enhance the learning experience, a course should have at least one (and usually multiple) interactive element in each screen. In addition, the adult should have more than one interactive method to navigate from one screen to the next, or back to any previous screen or module section. These navigational aids might include arrows at the top and bottom of each screen, as well as links to earlier sections for quick review before the module exam.

The course may also be designed to accommodate the special needs of older adults, offering larger type and/or audio whenever text appears on-screen. Since computers can adapt to fit an adult's weakening eyes and ears—enabling the user to increase the font size or activate text-to-speech feature—so should e-learning courses adapt to fit the aging user. Adults should also be able to use their preferred mode of learning. For example, an e-learning module can prompt the learner to choose among three options to receive the same content: listening to an audio clip of a speaker, viewing a video clip of the same speaker, or reading the text. Simulations can allow kinesthetically adept learners to build a diagram by dragging and dropping its various components into a template.

Adults Are People, Too

Any course that incorporates adult learning principles requires that its learners be respected as adults, recognized as unique individuals and treated as professionals. Adults should learn from—and not be ridiculed for—mistakes made during the course. They can be encouraged to be creative in their solutions to scenarios and problems, since some rules in life can be bent depending on the circumstances. Despite their years of experience, adults need immediate reassurance that they have understood the knowledge and can perform their new skills in the real world. E-learning provides that instant feedback as an extra shot of positive reinforcement.

Finally, applying adult learning principles also promotes in learners a high degree of self-esteem that results from taking a course that is challenging, relevant and tailored to the way they learn. After the course, learners are usually forthcoming with feedback of their own to help make the experience even more rewarding for those adult learners who follow.

About Zipline Performance Group, LLC

Zipline Performance Group LLC is a 21st-century information company. It produces resources to help people grow and interact. Zipline's Learning Services division offers an extensive platform of custom learning program development, educational consulting services, customizable learning solutions and certification programs. Zipline's Online Communities division develops online communities that inform, educate and entertain. Zipline is based in Littleton, Colo.

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