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Designing Instructional Articles in Online Courses for Adult Learners

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Introduction

At most schools of education aspiring teachers are taught the elements of *pedagogy* – the art and science of teaching children. Many aspects of teaching adults are fundamentally different than those employed in teaching children and for this reason a new word gained currency in the late 20th century – *andragogy*. This article highlights the important principles in teaching adults and suggests teaching strategies to support these principles in online courses for higher education and corporate learning programs. To demonstrate these principles, the full-text of this article is also available in an online instructional format that the reader may wish to follow in lieu of or in parallel with this standard journal format (see <http://roi-learning.com/demo/courses/>).

Pedagogy and Andragogy

According to the American Heritage Dictionary the word *pedagogy* is derived from the Greek *paidaggos* which referred to the slave who took children to and from school. Although commonly understood to be "the art or profession of teaching" (The American Heritage® Dictionary of the English Language, 2000) most schools of education train new teachers in methods and techniques that are most relevant to the teaching of children. Some critics even suggest that "pedagogy embodies teacher-focused education." (Conner, 1995, para. 1)

The German educator Dr. Alexander Kapp coined the term *andragogy* (actually "andragogik") in 1833 (Reischmann, 2000, para. 1), but it was not widely used until it was resurrected, refined, and popularized in the 1970's and 1980's by Dr. Malcolm Knowles. According to Knowles two key differences in the ways that adults and children approach learning are the adult desires 1) to be self-directed and 2) to take responsibility for decisions, (Carlson, 1989 and Atherton, 2002, para. 2). Courses that address adult learning must be sensitive to these desires and should be designed accordingly.

How Adults Learn

An article on andragogy in the Theory Into Practice (TIP) database (an excellent online resource by Greg Kearsley, PhD, that presents fifty learning and instructional theories in a form useful to practicing educators) states that Knowles concept assumes that:

- adults need to know why they need to learn something,
- adults need to learn experientially,
- adults approach learning as problem-solving, and
- adults learn best when [they believe that] the topic is of immediate value. (Knowles, 1984, para. 2)

Principles of Adult Instruction

In their latest book, *Telling Ain't Training*, Harold Stolovitch and Erica Keeps summarize Knowles's work into four key principles of adult instruction:

1. **Readiness:** Training must clearly address learners' needs so that they will be ready to learn.
2. **Experience:** Training must respect and build on the life experience that learners bring to the learning session.
3. **Autonomy:** Training must invite learners to participate in shaping the direction, content and activities of the learning experience.
4. **Action:** The connection between the training and the application of what is learned must be clear. (Stolovich & Keeps, 2002)

These principles suggest that teaching strategies such as case studies, role playing, simulations, and self-evaluation are most useful. Instructors should also favor the role of facilitator and resource rather than that of lecturer and grader (Knowles, 1984, para. 2).

Although Stolovich and Keeps wrote their book for corporate trainers, their rules clearly apply to college and university instructors who are educating both young adults and older adult students committed to lifelong learning.

Applying the Principles

Principles are great, but how do we apply them? How do we transform this great advice into online courses that are more interesting and effective for adult learners?

In our experience over several decades of developing and delivering traditional and technology-enhanced training in the corporate world, we have often witnessed the gap between good principles and their application. To remedy this in the remainder of this article we examine one common online teaching strategy – the instructional article – in some detail and explain how the ideas we have discussed so far can be put into practice.

Instructional Articles

While adult learning tends to be more problem-centered than content-centered, it is still usually necessary for students to learn specific knowledge prior to moving up to new levels of performance. In many classroom courses this knowledge transfer occurs through the time honored instructional method called “lecture.” Unfortunately (or probably fortunately!), reading long lectures on the web will not work.

For self-paced courses, online or web-based training, instructional articles are a good instructional method to use in place of the lecture. An instructional article is a short and concise document conveying relevant, critical information to support concepts, procedures, and/or performance-based skills. The instructional article is written specifically to enable learning to occur and improved performance to follow.

Unlike a sub-chapter of a book, an instructional article should be written so that it can stand largely on its own and be read and understood independently. This is important because the flexible navigation in most online courses allows learners to jump easily from one article to another, studying some articles in detail and skipping or skimming others. Although as designers we may consider this user behavior undesirable, it is likely to happen and we would be wise to design our instructional articles so that we maximize the probability of student success.

Key to the learning success of instructional articles are two words in the short definition above: relevant and critical. As skilled instructional designers developing course content we should continually ask ourselves: what types of information and knowledge will the learner need to comprehend a concept and later to perform a certain task or skill. We should remember the old instructional design distinction between “need to know” and “nice to know.” As explained above, adult learners will only be attentive to self-paced instruction if the content is relevant to them and they see the knowledge as critical to their mastery of the desired skill. Good designers, like good authors, know when to add material that engages the learner (adds color, richness, and depth), while saving the “nice to know” material for the web site reference section.

We recommend that you follow these specific content guidelines when creating instructional articles:

- Each instructional article must support the learning objectives/goals of the course.
- Get the learner's attention immediately by clearly making the topic relevant to something important within the learner's frame of reference, i.e., job, studies, professional development.
- The body of the article should follow the traditional form of good expository writing with an introductory paragraph, one or more explanatory paragraphs, and a summary paragraph.
- The body of the article may also contain questions or other interactive activities, such as exercises, problem-solving situations, or short simulations.
- Always keep the instructional article to one or two main ideas or concepts.
- Use only the most important "need-to-know" supporting detail.
- When it's possible, support the article content with audio and/or video clips containing relevant information, such as "how to's" or examples that help further clarify key learning points. Embed a link to the audio or video clip within the article or have the links set aside in a menu next to the article.

Organize the structure and navigation of an instructional article to enable the learner to read and review the instructional content in a short time as well as take advantage of any links, graphics, or animation that supports learning the content. Follow these simple guidelines to ensure the right structure and navigation:

- Minimize the need for the learner to scroll through text. When instructional article is printed it should be no longer than 3 pages.
- Use only graphics, diagrams, or pictures which lend meaning and clarification to the topic. (In some cases graphics can also be used to get the learner's attention, but these should not be overused or their effectiveness will diminish and the learner will consider them an annoying distraction.)
- For ease of navigation, at the end of an instructional article display a link to the next article or interactive exercise. Also, a link to the main course menu should be available on every page.
- Hyperlink all key words, phrases and/or concepts within the instructional article to some type of glossary or reference providing for definitions and additional clarification as needed by the learner

The online instructional format of this article (see <http://roi-learning.com/demo/courses/>) provides examples of several of these points. Each page is short, and most pages require no scrolling. Graphics are used judiciously. Each page provides clear links to the previous page, the next page, and the beginning of the article. Since there is no overarching course of which this article is a part, there is no link to a main course menu. The example does not contain a global glossary, although at least one important online

learning environment (Moodle – see moodle.org) provides a powerful automated glossary feature as part of its course development toolset.

Remember: Simple, clear navigation will help the learner feel in control and avoid distraction and frustration with the course. These simple guidelines for content, structure, and navigation create instructional articles on sound design principles that support effective learning.

Interactive Instructional Methods

Instructional articles should only be one of several instructional methods or teaching strategies used in an on-line course. As mentioned earlier, teaching strategies such as case studies, role-plays, simulations, and self-evaluations should be used as appropriate to support the problem-centered orientation required for successful adult learning.

Case studies are one of the stronger strategies and generally do not require a great deal of special programming. (For an example of an online case study, see the second link at <http://roi-learning.com/demo/courses/>.) Case studies which are highly experiential and job-related work best when coupled with supporting instructional articles. In this way the learning experience can be more “learner-directed”, one of Knowles rules for applying andragogical principles to the learning. Instructional articles may include a case study within the body of the article with important points to be drawn from it in support of learning a particular fact or concept.

Alternatively, the course could be set up with a single case study linking all the instructional articles and student exercises. Instructional articles would then be used by learners as needed to help develop solutions to the problems being solved. How learners use the instructional articles will depend upon how they approach the case study which in turn is based upon their level of knowledge and the mistakes they make.

Simulations may require more web development expertise but can be a useful strategy for learners needing to practice using software or working through the installation or repair of complex equipment. (For an example of an online simulation, see the third link at <http://roi-learning.com/demo/courses/>.) This type of learning strategy is task-oriented and self-directed, another application of the principles of andragogy.

Self-evaluations typically tend to be quiz questions, such as multiple choice or true/false. Increase motivation and learner involvement by making the self-evaluation into a game such as a crossword puzzle. In a crossword puzzle, the critical cues for the Down and Across words may be taken from definitions within the course content.

Summary

Business trainers, coaches, instructional designers, and university educators need to understand the dynamics of adult learning as described by Knowles and others. Although

Knowles's work has elicited some controversy (particularly among those who feel that he set up an artificially narrow definition of pedagogy in order to promote his ideas), his insights into adult learning behaviors and motivations are supported by other research and are generally accepted today.

Excellent online training courses for adults apply creative combinations of teaching strategies, using methods like instructional articles, case studies, simulations, and self-evaluations to engage learners. Such courses adhere to the following:

- the **readiness principle**, enabling adult learners to see the relevance of the material;
- the **experience principle**, respecting the expertise learners bring to the course;
- the **autonomy principle**, allowing learners to control their own learning paths through meaningful exercises and activities; and
- the **action principle**, emphasizing clearly and continually the connections between what is being learned and the real world in which it will be applied.

The two versions of this article — the standard journal format presented here and the online instructional format on our Web site (see <http://roi-learning.com/demo/courses/>) — demonstrate the difference format makes. This journal format is an easy, quick read and it can be very useful as a compact future reference. In printed form it can be augmented with personal highlighting and handwritten notes. The instructional format that actually employs these teaching strategies, on the other hand, is a more engaging experience in which the learning objectives are more effectively presented and reinforced. Each format has its place, but the instructional format is more specifically designed to take participants beyond the passive acquisition of information associated with their interests by providing the experiences necessary to deepen their understanding and enable them to apply what they have learned.

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Note: Web pages cited based on content accessed on 24 July 2003.

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