High Attrition Rates in e-Learning: Challenges, Predictors, and Solutions

BY MARGARET MARTINEZ

You’ve probably heard that people drop out of e-Learning at very high rates and that nobody knows what to do about it. But the last part of that statement isn’t really true. Some organizations and some researchers do know what to do about it, and we can all benefit from their experience. Let me give you an example.

The University of Phoenix has built its commercial success, in part, by understanding important learner considerations, especially social issues. Here’s what William Symonds had to say recently about Phoenix Online, in a Business Week article published in June, 2003:

“... Phoenix Online realized that interaction with humans — the professor and other learners in the class — was far more important to success than interaction with the digital content. Thus, Phoenix Online keeps its classes small, averaging just 11 learners. And to combat the Achilles heel of distance education — a high dropout rate — it offers its learners plenty of hand-holding, including round-the-clock tech support. The result: 65% of its learners go on to graduate.”

Clearly, it is important to anticipate issues that cause learners to quit e-Learning without completing the objectives, and to deal with those issues effectively. Successfully reducing the dropout rate allows better allocation of delivery resources as well as providing improved return on investment.

Learner attrition and retention (the two halves of the drop-out problem) are not
Continued on next page
The articles contained in the Journal are all written by people who are actively engaged in this profession at one level or another — not by paid journalists or writers. Submissions are always welcome at any time, as are suggestions for articles and future topics. To learn more about how to submit articles and/or ideas, please refer to the directions in the side-bar on page 6 or visit www.eLearningGuild.com.

new challenges. Most colleges and universities routinely face them, especially with first-year students who are often unprepared for self-directed learning. It may be a surprise to learn that half of all freshmen today drop out before completing their programs. Now, outside the world of academia, trainers are finding that requiring a higher degree of self-motivation or self-direction in e-Learning is also associated with higher attrition and lower retention. People drop out, and we wonder, “Why?”

We can learn much from the retention research conducted for universities and colleges. In these institutions, researchers have been able to identify common predictors that correlate completion with learner characteristics, experiences, and settings. Many universities and colleges have developed attrition management plans in order to better understand and address the dropout problem. Solutions found in higher education have improved retention through analysis and placement of students, collaboration between administrative departments, learner advice and management, and curriculum integration.

Any organization can create an attrition management plan to incorporate such solutions, tailored as necessary to government or private enterprise situations. Such a plan will coordinate strategies for implementation, delivery, and progress measurement across entire learner populations. But plans adapted from higher education can now be made better.

e-Learning designs that accommodate individual learner profiles through “personalization” principles further reduce online dropouts. Recent neuroscience advances support the notion of these profiles. Personalization complements and extends more traditional approaches, including attrition management plans. Cost-effective technologies exist to identify and support key success attributes that are important to a learning audience, and to tap into self-motivation and self-direction. Through these technologies, it is possible to identify at-risk learners, improve the quality of the learning experience for every student, get the right message and the right tools to each person at the right time, and encourage learner achievement and continuing performance improvement.

This article provides the background information needed to apply these personalization principles and to develop an attrition management plan for e-Learning in your organization.

Introduction
Keeping online learners engaged and enrolled is a tough challenge. The reality is that many learners who function well in classrooms are not ready for online learning. Typical learners have developed a classroom learning ability over time. They know how to interact with teachers and with other students, and they know how to take tests.

Online, learners require an expanded set of skills to be successful. In the same vein, trainers need a different kind of design and teaching perspective for the online world, in contrast to the classroom. These are two sides of the same coin.

Until the advent of online learning, it was enough to design primarily cognitive-based solutions, driven by the ways people process information, and to rely on the instructor to provide the personal touch during delivery. Something similar to that personal touch is even more important online. Research suggests that e-Learning outcomes, including completion rate, improve when the instructional presentation adapts to the learner’s aptitude, expectations, and personality.

Good classroom trainers intuitively pay attention to key human factors, and adjust content, presentation, and other factors as needed to promote learning. Trainers receive important cues from learner emotions, and from expressions of learner intent. Learner persistence is something that has to be inspired and nurtured throughout the learning and teaching experience. Online, of course, the usual cues to learner emotions are not available to an instructor or to an e-Learning application.

Definitions
Definitions are important in this discussion, so here are three terms that you will see throughout the next few pages.

Attrition refers to a decrease in the number of learners or students engaged in some course of study. This course of study might be a degree plan, or it might simply be a standalone online course.
Attrition takes place when a learner leaves the course of study, for any reason. Institutions of higher learning often differentiate between the “dropout,” who never returns and never completes the course of study, the “stopout,” who leaves but comes back later to finish, and the “attainer,” who leaves before completion but who has nonetheless achieved some personal goal—a specific skill, for example. In other settings (business or government), these distinctions may be made less often. Understanding the differences, and identifying examples of each kind of attrition, could be useful information in many organizations in guiding improvement efforts.

Retention refers to the number of learners or students who progress from one part of an educational program to the next. In higher education, this is normally measured as enrollment from academic year to academic year. In other settings, retention may simply be the inverse of the attrition rate. It may be defined as the number of learners who progress from one module to the next, or from one certification to the next.

Persistence relates to the act of continuing toward an educational goal. In higher education, a “persister” is simply one who achieves a degree or certificate and graduates “on time.” In other institutions, persistence may not be the term of choice, and instead the issue is simply the number of individuals who complete the required course, modules, or criterion tests.

Learning design and attrition issues

Successful e-Learning designers, instructors, and trainers know that online instruction can encourage persistence and reduce attrition, to the extent that the design and implementation recognize and tap into how individuals may want to learn. Unfortunately, many of today’s e-Learning designs lack appropriate personalized support that will help individuals manage their online experience, stay motivated to finish the course, and learn satisfactorily.

Personality issues must be considered from the very beginning of the e-Learning design process, during planning and analysis. An analysis is inadequate if it does not determine the key personality attributes and sources for learning differences in the learner population. The ongoing analysis of the audience must go so far as to determine why some of the learners are less persistent, successful, self-directed, or motivated than others.

Designers must also understand how to apply the specific strategies, derived from new research, that support and foster greater persistence and self-motivation. This approach will help to identify “at risk” learners and provide the solutions, interactions, and environments that will eliminate or minimize the demotivating elements. If the design is causing attrition because it frustrates or drains interest, analysis will make this obvious.

Attrition management in higher education

Traditional theories addressing learner attrition at institutions of higher learning consider various issues, characteristics and settings. These usually include demographics, ethnicity, family, economics, experiences, background, and related variables. Additionally, studies often cite personal reasons such as family problems, finances, child care, distractions, and job needs and demands as the cause of withdrawal.

There is, as yet, no consistent view among educators of the key factors. However, over time, various attrition models have been proposed. One of these is more often used than the others, comes close to being a working standard, and forms the basis (or at least the point of departure) for many attrition management efforts.

Tinto’s model

Vincent Tinto’s model is commonly referenced in the learner retention/dropout literature. (See Figure 1, above.) The model’s concept is that of “integration” of multiple influences on attrition. The model claims that whether a learner persists is strongly predicted by that learner’s degree of academic and social integration.

Attrition management examples

There are a number of guidelines and examples of attrition management plans and strategies available on the Web. Several are included in the sidebar on page 8. These are:

- An Examination of the Retention Literature and Application in Learner...
Success (Harvey-Smith, 2002)
• Community College Survey of Learner Engagement (CCSSE, 2003)
• Retention Revisited (Seidman, 1996).
• Strategic Plan (MSU-Bottineau Administrative Council, 2003)
• Strategic Retention Planning (University of Memphis, 2002)

Attrition management framework
An attrition management plan should deal with retention issues based on a coherent framework combined with a more effective method for measuring progress. An overview of the framework should provide a reliable definition of retention. The framework should link business or academic strategy and priority to a strategy for learning, development, and evaluation, and then to a learning blueprint. Aspects of the framework should include the following elements:
• Business or academic strategy and change vision
• Organization principles, needs, resources, and priorities
• Individual and team needs
• Stakeholders goals, priorities and needs
• Key processes, interactions, and activities
• Key programs, facilities, and resources
• Measures and accountability

Where do current attrition management plans fall short?
The literature to date does not provide strong proof or good tests of retention and attrition theory. Additional consideration and integration of important neurobiological characteristics, such as locus of control or goal orientation, is needed.

Note that most of the examples available on the Web do not consider individual learning differences; they assume that “one size fits all.” This type of untargeted approach wastes resources. What is needed is an integration of conventional models offering a more evolved understanding of individual learning differences based on neurobiological foundations. Research is suggesting that locus of control, measured by Julian Rotter’s Locus of Control scale (see the Readings in the sidebar), is a significant predictor of academic persistence. In my opinion, leaving the differing aspects of learner control out of the discussion is an important omission.

Learning orientations
 Neuroscientists are helping us identify individual differences in learning, memory, and brain development that govern specific aspects of learning success. Emotion and intention to learn are powerful forces — on these two depend how well individuals purposefully manage information, plan, and set and accomplish goals. These are consistent findings in the research. Ultimately, these are the factors that influence learner persistence, attrition, and retention.

Whole-brain perspectives
Recent research highlights the strong impact of three additional factors on persistence and performance, namely an individual’s independence, goal orientation, and locus of control. These characteristics also impact factors commonly associated with learner retention and attrition, including engagement, expectations, motivation, self-direction, and attitude. Studies are beginning to show that these three factors can be used to distinguish learners who complete courses from those who do not.

The neurobiology of learning and memory is the source of learning differences, including differences in persistence. Emotions (e.g., fear, frustration, passion, motivation, and happiness) and intentions (e.g., will, striving, and commitment) greatly impact personality charac-
teristics — including locus of control as well as how learners persist to meet goals, learn and perform tasks, and succeed.

An important concept: Locus of control

Some researchers describe locus of control as a concept that considers how some people feel that they have high control of managing their lives (an internal locus of control) while other people feel that they must rely on forces outside of themselves (an external locus of control).

People with a strong internal locus of control tend to be highly motivated, and believe that they can make a difference in the outcome of a situation. Those with a strong external locus of control see their lives as being directed by luck and forces outside of their control. They may believe that change brings risk and fear of the unknown; they may blame others for the outcomes of their behavior. While most people fall in a range between the two, several researchers have found that drop-outs scored higher in external locus of control, that is, they felt they were more controlled by external events.

Learning orientation model

Learning orientation theory (summarized at http://www.trainingplace.com/source/research/overview.htm) represents human learning variability from a whole-brain perspective. Learning orientations represent a comprehensive set of psychological factors (conative, affective, cognitive, and social) that influence how individuals approach learning. (Editor’s Note: See Dr. Martinez’ article, “What is Personalized Learning?” in The eLearning Developers’ Journal, May 7, 2002.) This perspective is more robust than the primarily cognitive explanations of learning differences (e.g., learning styles) because it highlights the dominant developing, guiding, and managing influences of emotions and intentions on cognitive and social processes. Personalization without including a whole-person neurological foundation is unsatisfactory and incomplete.

The Learning orientation model (summarized at http://www.trainingplace.com/source/research/lomatrix.htm) presents profiles for four dominant learning orientations: Transforming, Performing, Conforming, and Resistant. These orientations describe the range of learning approaches (e.g., differing locus of control) within any learner population. They are summarized in Table 1, above.

You can find more learning orientations research information at http://www.trainingplace.com/source/research/index.html

These profiles show the degree to which learners, following beliefs, values, emotions, and intentions to learn, generally commit effort and self-manage the learning process to attain goals, monitor or assess learning progress; and use reflection to improve future learning opportunities. Depending on the specific learning circumstances and the individual’s ability, a learner may cover a range of tasks with a single learning orientation or they may move downwards or upwards on the table of orientations in response to negative or positive responses, conditions, resources, results, expectations, and experiences.

Extending the attrition management model

What additional considerations are there when implementing an attrition management plan? With the long-term goal to reduce attrition, such a plan should also improve learner motivation, independence, persistence, satisfaction and accomplishment. It is important to find the right balance between maximizing individualized learning opportunities and accomplishment of business, educational, and performance goals. It is not enough to simply talk about attrition and persistence problems! These problems should be managed with a formalized attrition management plan offering targeted strategies for implementation,

### TABLE 1 Learning orientations model

<table>
<thead>
<tr>
<th>Learning orientation model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transforming learners</td>
<td>Transforming learners deliberately use personal strengths, deep desires, strong emotions, persistent and assertive effort, and sophisticated, abstract or holistic thinking ability and strategies to self-manage learning successfully.</td>
</tr>
<tr>
<td>Performing learners</td>
<td>Performing learners are low-risk, semi-skilled to skilled learners who rationally, systematically, and capably use psychological processes, strategies, preferences, and self-regulated learning skills to achieve learning objectives and tasks. In contrast to transforming learners, performing learners are more selective about how hard they work on learning goals. They prefer focusing on the process and steps towards attaining worthwhile, to them, goals.</td>
</tr>
<tr>
<td>Conforming learners</td>
<td>Conforming learners who prefer to more passively accept knowledge, store it, and reproduce it to conform, follow simple steps to complete assigned tasks, and please others.</td>
</tr>
<tr>
<td>Resistant learners</td>
<td>Resistant learners lack a fundamental belief that (1) achieving learning objectives set by others is of any value or worth the effort, (2) they can learn and enjoy achieving goals set by others, or (3) academic learning and achievement can help them achieve personal goals or initiate desired changes. A resistant learner’s personal goals strongly conflict with learning goals set by others.</td>
</tr>
</tbody>
</table>

These profiles are summarized in Table 1, above. They represent human learning variability from a whole-brain perspective. Some researchers describe locus of control as a concept that considers how some people feel that they have high control of managing their lives (an internal locus of control) while other people feel that they must rely on forces outside of themselves (an external locus of control).

Learning orientation model

Learning orientation theory (summarized at http://www.trainingplace.com/source/research/overview.htm) represents human learning variability from a whole-brain perspective.

Learning orientations represent a comprehensive set of psychological factors (conative, affective, cognitive, and social) that influence how individuals approach learning. (Editor’s Note: See Dr. Martinez’ article, “What is Personalized Learning?” in The eLearning Developers’ Journal, May 7, 2002.) This perspective is more robust than the primarily cognitive explanations of learning differences (e.g., learning styles) because it highlights the dominant developing, guiding, and managing influences of emotions and intentions on cognitive and social processes. Personalization without including a whole-person neurological foundation is unsatisfactory and incomplete.

The Learning orientation model (summarized at http://www.trainingplace.com/source/research/lomatrix.htm) presents profiles for four dominant learning orientations: Transforming, Performing, Conforming, and Resistant. These orientations describe the range of learning approaches (e.g., differing locus of control) within any learner population. They are summarized in Table 1, above.

You can find more learning orientations research information at http://www.trainingplace.com/source/research/index.html

These profiles show the degree to which learners, following beliefs, values, emotions, and intentions to learn, generally commit effort and self-manage the learning process to attain goals, monitor or assess learning progress; and use reflection to improve future learning opportunities. Depending on the specific learning circumstances and the individual’s ability, a learner may cover a range of tasks with a single learning orientation or they may move downwards or upwards on the table of orientations in response to negative or positive responses, conditions, resources, results, expectations, and experiences.

Extending the attrition management model

What additional considerations are there when implementing an attrition management plan? With the long-term goal to reduce attrition, such a plan should also improve learner motivation, independence, persistence, satisfaction and accomplishment. It is important to find the right balance between maximizing individualized learning opportunities and accomplishment of business, educational, and performance goals. It is not enough to simply talk about attrition and persistence problems! These problems should be managed with a formalized attrition management plan offering targeted strategies for implementation,
management, and measured progress. When developing models for today’s more personalized online learning, there are two steps to take. The first is to explore, understand, and use some of the new information about extraordinary whole-brain activity, learning processes, and social interactions. This is to be done in the context of instructional goals, learner purpose, motivation, independence, persistence, and self-directed learning.

The next step is to use the “brain research” foundations to develop an attrition management plan. In other words, consider those “personalization characteristics” that particularly impact attrition and persistence. This plan should provide a framework within which one can analyze and differentiate audiences, identify key success attributes, predictors, and retention issues, track attrition rates, and provide and evaluate solutions that support retention and minimize attrition.

What to cover in an attrition management plan for e-Learning

The plan should cover key points, including strategies to:

- Consider the impact of emotions and intentions on learning, persistence, and self-motivation to learn.
- Identify causes for non-completion.
- Determine predictors that correlate learner settings, situations, and characteristics (e.g., independence, self-direction, and self-motivation) with learner retention, accomplishment, and completion of courses and academic programs. For example, frequency and quality of contact with faculty, staff, and peers has repeatedly been shown to be a good predictor of learner persistence for learners with low locus of control or conforming learners.
- Implement and manage the transition from instructor-led to online learning.
- Predict and track potential and actual persistence with some accuracy.
- Apply results to improve policy making, budgets, and resource allocation.
- Improve and direct curriculum and learner support programs towards improved quality, increased enrollment, and learner retention (e.g., transition programs, counseling, and support for special populations).

A good attrition management plan needs to:

- Be flexible enough to change as the needs change.
- Ensure that the plan’s substance and foundation is the learner.
- Ensure positive workplace, learning, and social settings — in which learners and learning is valued.
- Measure and report to management, learners, and stakeholders.
- Represent core values and expected outcomes.
Summary and recommendations

e-Learning requires a higher degree of self-motivation, self-directed learning, and greater persistence and commitment from the learner. These requirements can create the serious problem of high attrition rates and costs if not recognized and managed strategically. Too many learners lack adequate preparation for the rigors of e-Learning and are less likely to complete programs or courses. A better understanding of “at risk” learners is critical.

Over the years, many models of persistence have evolved to address attrition and retention issues, particularly focusing on learner’s reasons for dropping out. These models, primarily university- and college-based, examine which factors relate to persistence. Identified as predictors, these factors are the typical reasons learners give for dropping out, including ability, academic and family matters, instructors, finances, full-time jobs, dissatisfaction, and lack of direction or reasons to complete.

Today, non-traditional attrition studies are considering the impact of psychological factors (such as locus of control and goal orientation) on persistence (i.e., goal-directed behavior). In the new models, the traditional factors associated with retention and attrition may become secondary or contributing factors (albeit still important factors).

The whole-person factors are being studied as a primary or dominant influence on persistence. For example, highly goal-oriented learners persist and seek education as a means to accomplish specific objectives and accomplishments. In contrast, “at risk” learners have lower levels of persistence towards completion. With the growing recognition about the need for targeted learner support or remedies for more personalized learning experiences, personalized technologies exist to identify and support key success attributes that are important to a learning audience, and to tap into self-motivation and self-direction.

The eLearning Guild’s Advisory Board

A leading organization needs focused leadership. The eLearning Guild is proud to have the support and guidance of these industry leaders serving on its Advisory Board:

Ruth Clark
Author and Principal, Clark Training & Consulting

Conrad Gottfredson
Principal, Conduit Tecknowledgy

John Hartnett
President, BlueMissile, Inc.

Bill Horton
Author and Principal, William Horton Consulting

Kevin C. Moore
Co-Founder, Tier 1 Performance Solutions

Eric Parks
President, ASK International, Inc.

Marc J. Rosenberg
President, Marc Rosenberg and Associates

Allison Rossett
Professor and Author, San Diego State University

Brenda Pfaus
President, Spectra Interactive Learning

Continued on page 9
### References


### Readings


learning needs, many educational institutions have upgraded the level of student-support services and developed attrition management programs to identify and support “at risk” learners. As a result, they can encourage learners, as needed, to stay, be satisfied, and persist towards completion. An attrition management plan is the first thing that can be done to apply relevant interventions to improve attrition rates and support better learning, achievement, performance, and career development.

Finally, collecting data about persistence associated with e-Learning and course completion has the potential benefit of guiding management decision-making with respect to planning, policy making, and providing future services aimed at learner support and improved return on investment.

AUTHOR CONTACT
Dr. Margaret Martinez, CEO, The Training Place, has worked in the fields of learning, information, and technology for more than fifteen years. Previously, she was the Worldwide Training and Certification Director, WordPerfect Corporation. Dr. Martinez is a respected consultant on adult learning methodologies and strategies and is considered an expert in learning orientation research — the study of how people learn differently and most effectively. She often presents at major conferences and publishes in academic and trade publications. Contact Dr. Martinez at mmartinez@trainingplace.com.

ONLINE DISCUSSIONS
Extend your learning beyond the printed page! If you are looking for more information on this topic, if you have questions about an article, or if you disagree with a viewpoint stated in this article, then join the online discussions and extend your learning.

Follow these easy steps to participate:
2. Click on the Online Discussion link on the left-hand navigation menu.
3. Select this article by title from the e-Learning Discussions list, or use the Search Subjects/Post box to find it.
4. Click on Add A New Message.
5. Enter your message. It will be posted as soon as you hit the Add Message button on the form.

Additional information on the topics covered in this article is also listed in the Guild Resource Directory.

Resources, Resources, Resources
The Guild hosts the e-Learning industry’s most comprehensive resource knowledge database. Currently there are over 2,300 resources available. Members have access to all of these resources and they can also post resources at any time!

Guild Research
The Guild has an ongoing industry research service that conducts surveys on 20 topics each year. These topics are identified by the Research Advisory Committee. The data collected is available for all members.

It’s About Leadership
The Guild draws leadership from an amazing Advisory Board made up of individuals who provide insight and guidance to help ensure that the Guild serves its constituency well. We are honored to have their active engagement and participation. The Guild has also established three committees made up of active members who help steer its editorial, events program and research efforts.

Discounts, Discounts, Discounts
Guild members receive discounts on all Guild conferences and on other selected products and services. Your Guild membership will save you 20% off the list price of Guild events!

Join today at www.eLearningGuild.com!

Become a member today! Join online at www.eLearningGuild.com.