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The eLearning Guild's

LEARNING SOLUTIONS SM

Practical Applications of Technology for Learning e-Magazine

THIS WEEK: Design Techniques

Put the *Learning* Back in e-Learning – Making it Meaningful, Relevant, and Engaging

By Gus Prestera

A hush fell over the auditorium when the question was asked. The distinguished panel of learning and performance experts sitting on the dais also seemed momentarily stunned into silence, uncertain how to respond. The conference-goers waited attentively, because it was a question on so many minds, yet few would have had the courage to ask it in a room full of e-Learning professionals. The training manager repeated the question, "Why are so many Web-based training courses poorly designed?" That moment of silence and hesitation spoke volumes to me about this 500-pound gorilla standing by the water cooler, as it were.

ASTD's 2005 State of the Industry Report, by Brenda Sugrue and Ray Rivera, projected that the percentage of learning hours delivered via self-paced, Web-based training (i.e., courseware) would rise to 18.3% in 2005, up from 16.3% in 2004 and 9.8% in 2003. While increasingly popular among training managers, courseware may be less popular among learners. An early study, done in 2001 by Karen Frankola, reported that 20% to 50% of corporate learners do not complete their online courses, while Jeanne Meister in 2002 put the dropout rate at 70%. A Masie Cen-

In this week's article, a hard and embarrassing question led the author to insights about making e-Learning worthy of a learner's time and effort. There are three specific causes of poor design that account for many quality problems. Read on to learn what they are, and to find five recommendations and a tool to improve your design process. Your payoff may be some extraordinary results!

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ter study by Carrie O'Connor in 2003 surveyed 375 corporate learners and found that dropout rates for e-Learning were 26.3%, compared to 2.8% for classroom instruction. Though results vary across studies, the one consistent finding is that learners drop out of online courseware significantly more often than they drop out of face-to-face instructor-led courses.

So why should we find these figures alarming? Some have argued that if online learners are not finishing their courses, then perhaps it is because they are leaving their courses after getting what they needed to know, something that social pressure prevents them from doing in a classroom setting. I have even heard e-Learning vendors spin this sort of thinking into a benefit of courseware. There is no evidence, however, to support the notion that this is indeed why so many more e-Learners drop out of courses. Even if it were true, the research tells us that most learners do not know what they don't know, and that most learners are not very good at selecting what they *need* to know.

So why do e-Learners really drop out? The Masie study found that the two biggest factors in determining whether a learner dropped out or completed a course related to the learner's motivation (73%) and to the course's design (40%). So what can we as instructional designers do to reduce dropout rates? My work frequently puts me in the role of quality assurance reviewer for courseware designed by my firm, by my clients, and by other firms who seek my input. In that role, I have seen too many courses designed with little, if any, concern for whether the course and its content are relevant to the learner's work context, performance needs, and knowledge and skill gaps. If learners perceive that they need to improve in a particular skill area and perceive that the course can help them do so, then they are more likely to be motivated to take and to complete the course, assuming the course delivers on its promise. In other words, courses need to be worthy of completion, and it seems to me that, too often, they are not worthy.

Characteristics of a worthy course

So how do we design courses that *are* worthy of the learner's time and effort? In my 15+ years of experience in the realms of learning, performance, and coaching, I've found that the most worthy

***So what is it about our courseware design process that is so dysfunctional that it prevents many designers from designing courses that are* relevant, meaningful, *and* engaging*? We have narrowed down the most insidious culprits to three specific problem areas:* topic blindness, the source, *and* PAL alignment.**

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courses have three key characteristics: they are relevant, meaningful, and engaging (see my article, "Understanding ADDIE: A Foundation for Designing Instruction," listed in the References). Let's consider these three qualities in more detail.

Worthy courses are relevant

When relevance is top of mind, designers include only knowledge and skills that directly contribute to the learner's ability to perform more effectively on the job (at least in the context of workplace learning). They either subordinate or eliminate all other information. Designers avoid including abstract information; rather, they present information in the context of how it applies to an authentic job task or activity that the learner performs. For example, with product knowledge training for salespeople, you could present the learner with a litany of product features and benefits. Or, instead, you could demonstrate how the learner would present those features and benefits to clients during real-life sales situations. While the former is a de-contextualized strategy for designing training, the latter represents a contextualized strategy.

Let's consider another example. In Figure 1, right, you will notice that the designer is introducing a performance analysis model. Rather than simply describing the various elements of the model, the designer describes the model in terms of a process, a progression of questions that the learner should ask him or herself when faced with a performance problem. The remaining screens in this module describe the various steps of the model by taking the learner through a realistic scenario introduced earlier. Even with a somewhat academic and conceptual model like this one, it is possible for the designer to present it in a contextualized, performance-oriented manner.

Worthy courses are meaningful

Too often, I see course content so poorly written that only its SME could love it. This may be partly due to the limitations of the designer's writing abilities. However, another reason is that designers often take the SME's words too literally without distilling their meaning and communicating that meaning effectively in their own words. I often find myself asking designers, "What *meaning* are you intending to convey?"

At the same time, many so-called "multimedia" courses squander learning opportunities by using graphics that convey no substantial meaning. Ironically, multimedia designers often focus so much on communicating through words that they pay little attention to graphic organizers, animations, and other visual forms of communication. (*Editor's Note:* A "graphic organizer" is pictorial material intended to help a learner understand a concept, process, procedure, or principle, to clarify the structure of lesson content, or to communicate qualitative relationships. Topic maps are an example of one kind of graphic organizer.) Consider the screen in Figure 2, below. The screen relates to product specifications for e-Learning courses, yet the graphic is simply a stylized image of several

Figure 1
Present information in the context of the job or activity the learner performs.

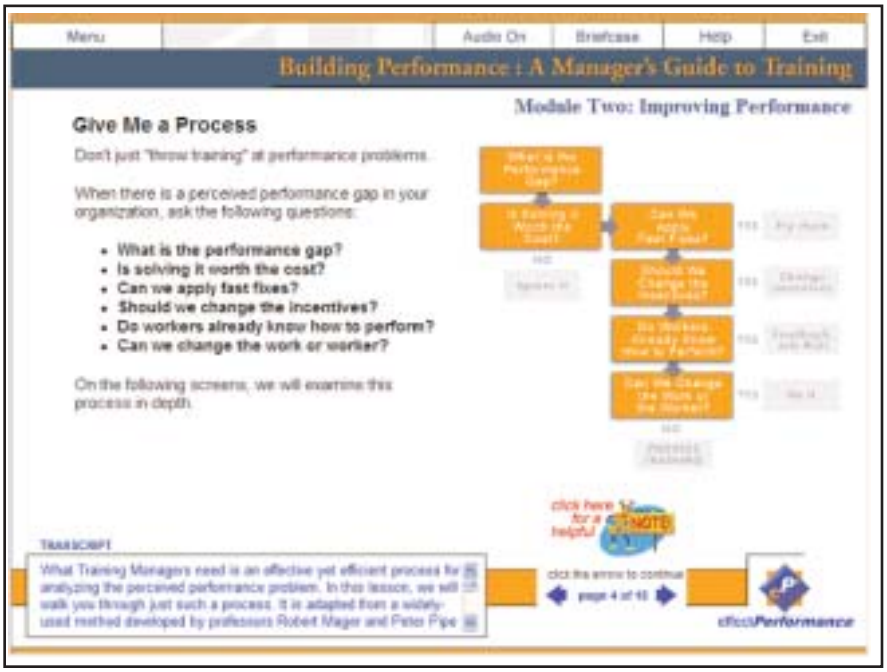

Figure 2 **The graphic on this course screen fails to convey any meaning related to the content.**

LCD monitors. Does the graphic help the designer convey any meaning?

Now, consider a different example. In Figure 3, below, the screen asks the learner to consider whether the two hypotheses will ever agree. Can you see how the graphic engages the reader and enhances the message by the inter-play of meaningful text and meaningful graphic? This is at the heart of what can make *multi*-media so effective, when designed properly.

Worthy courses are engaging

Often, the courses I review are flat-out boring. A typical course contains a few presentation screens (full of abstract information), followed by an abstract reinforcement exercise (usually multiple-choice, drag-and-drop, or matching), and then the cycle repeats, ad nauseam. At the end, there may be a multiple-choice test that checks to see if I've memorized all of the information. Since I haven't memorized it, and the designer has not conducted any sort of item analysis to make sure that the test is reliable and valid, I am usually able to pass the test within the first two attempts by simply guessing and applying some common sense. Can't we do better than that?

What engages learners?

Is it fancy graphics and animations? No, today's learners have come to expect professional-looking graphics. Poor quality graphics can be de-motivating or distracting. On the other hand, even the best graphics have only minimal and temporary positive effects on motivation. There needs to be substance behind the glitz in order to *sustain* learner engagement.

Is it interactivity? People like being asked to perform, and they benefit considerably from immediate, well-written feedback. However, when reinforcement exercises lack relevance and meaning, and when they are over-used, they can cause learners to disengage. The interactions in many courses I've seen resemble what can only be described as *hyper*-activity. I often counsel designers to consider: "When you are going to ask the learner to *do* something, be sure that it is worth the learner's time and effort to do it; otherwise, you (and the course) lose credibility with the learner."

Credibility is related to trust – learners need to trust that they will learn something valuable from the experience. Otherwise, why would they stick with it? Classroom instructors know the importance of credibility, because they face the immediate consequences of losing it. If they lose the learners' trust, the learners tune out. Multimedia designers rarely get to see how learners react to their courses, so the risk is that they can become insensitive to the needs of the learner.

Is it gaming? People, even those working in corporate America, enjoy playing learning games. Games are great for learning *associations*, applying *concepts*, and building *fluency*. However, learners get bored with our relatively simplistic games pretty quickly (as compared to *Doom* and other high-tech games out on the market), especially if a gaming strategy is used too often or if the games lack meaning and relevance.

Is it a simulation? Adults learn best when they get to *do* things. Well-designed computer-based simulations enable learners to perform tasks and to make decisions, and then to experience the positive and negative consequences of those actions and decisions. Poorly designed simulations can be just as boring as poorly designed tutorials, especially when they lack authenticity. In addition, the cost and timelines associated with simulation development are not always justifiable.

What else is there? An under-utilized strategy in e-Learning is case-based learning. While our online courses can rarely replicate the real-life conditions of the workplace, a case can help the learner analyze realistic situations, consider different perspectives, consider alternative solutions, make

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Figure 3
The message on this screen is enhanced by the interplay between the graphics used and the text.

decisions, and reflect on the consequences of those decisions.

Consider the simple exercise shown in Figure 4, below. The learner reads a case (which she downloads), analyzes it, and then types her response in the space provided. Upon clicking *Submit*, the learner is able to compare her response with a best-practice response provided by our SME. We have designed a variety of other case-based and scenario-based exercises that involve open-ended responses, multiple-choice, multiple-select, categorization, sequencing, and other commonly used types of reinforcement exercises. This can be a low-tech, low-cost approach to designing relevant, meaningful, and engaging learning activities.

The point is – consider ways to get learners engaged by tapping into their analytical, decision-making, and evaluation capabilities. Adults enjoy using their higher-order thinking skills, as opposed to memorizing facts. High-level thinking and decision-making is what adults do best, and it's what our workers generally get paid to do in their jobs. Jobs that involve regurgitating facts all day are in the minority.

So, again, the most successful courses I have seen, based on pilot feedback, Level 1 evaluation feedback, dropout rates, and on-the-job performance impact, share the characteristics of being *relevant*, *meaningful*, and *engaging*. Unfortunately, these kinds of courses are in the minority.

Some root causes of poor design

Why are good e-Learning courses so rare? Over the past few years, I have worked with colleagues and with my own designers, as well as with designers from other training firms, to identify root causes and best practices. Our investigation always comes back to *process*; specifically, to the front end of the instructional design process.

Good processes and good designers produce good courses. Not really a big surprise, I suppose. So, what is it about our courseware design process that is so dysfunctional that it prevents many designers from designing courses that are *relevant*, *meaningful*, and *engaging*? We have narrowed down the most insidious culprits to three specific problem areas: *topic blindness*, *the source*, and *PAL alignment*.

Problem #1: Being blinded by topics

Clients, SMEs, and even training professionals typically think of their training programs in terms of topics to cover, much like topics on a meeting agenda. A standard approach to content gathering is for instructional designers to work with SMEs to develop topic outlines, and then to use those outlines to generate learning objectives. Topics become the driving force behind the design of the course, rather than job tasks and the knowledge, skills, and attitudes ("KSAs") needed to perform those tasks. Rather than teaching someone how to make a widget or how to make widgets better, we wind up teaching them the history of the widget, features and benefits of the widget, and the components of the widget press.

Thinking purely in terms of "topics" is a slippery slope that often leads designers to think of training as a collection of topics, as ideas that need to be transferred from bin A (the course) to bin B (the learner). Everything we know about the brain, workplace learning, and the human experience tells us that this is a dangerous misconception. Training is not about transmitting knowledge; it's about meaningful learning experiences that lead to changes in the individual's thought processes, attitudes, and behaviors.

Problem #2: Not considering the source

Another standard practice is for courseware designers to be solely reliant on documentation and SMEs to tell them what content to include in a course. Documentation can include manuals, old training courses, and specifications documents.

Content rich, relevancy poor.

Because they are so focused on factual information, documentation-driven e-Learning courses

[D]esigners often take the SME's words too literally without distilling their meaning and communicating that meaning effectively in their own words. I often find myself asking designers, "What* meaning *are you intending to convey?"

Figure 4
Case studies are a low-cost way to provide relevant, meaningful, and engaging learning activities.

tend to be much longer than necessary and yet often manage to avoid discussing how the job should actually be performed. Recently, I was involved in redesigning an e-Learning courseware program. The average learner required six hours to complete it and pass the criterion test. Working with SMEs and target learners, we eliminated irrelevant, outdated, and unnecessary content, focusing the content purely on the job tasks. The result was that learners required, on average, only two hours to meet the criterion objectives and complete the course. Less is *not* always more, but if it's the right "less," then less content certainly can be more effective.

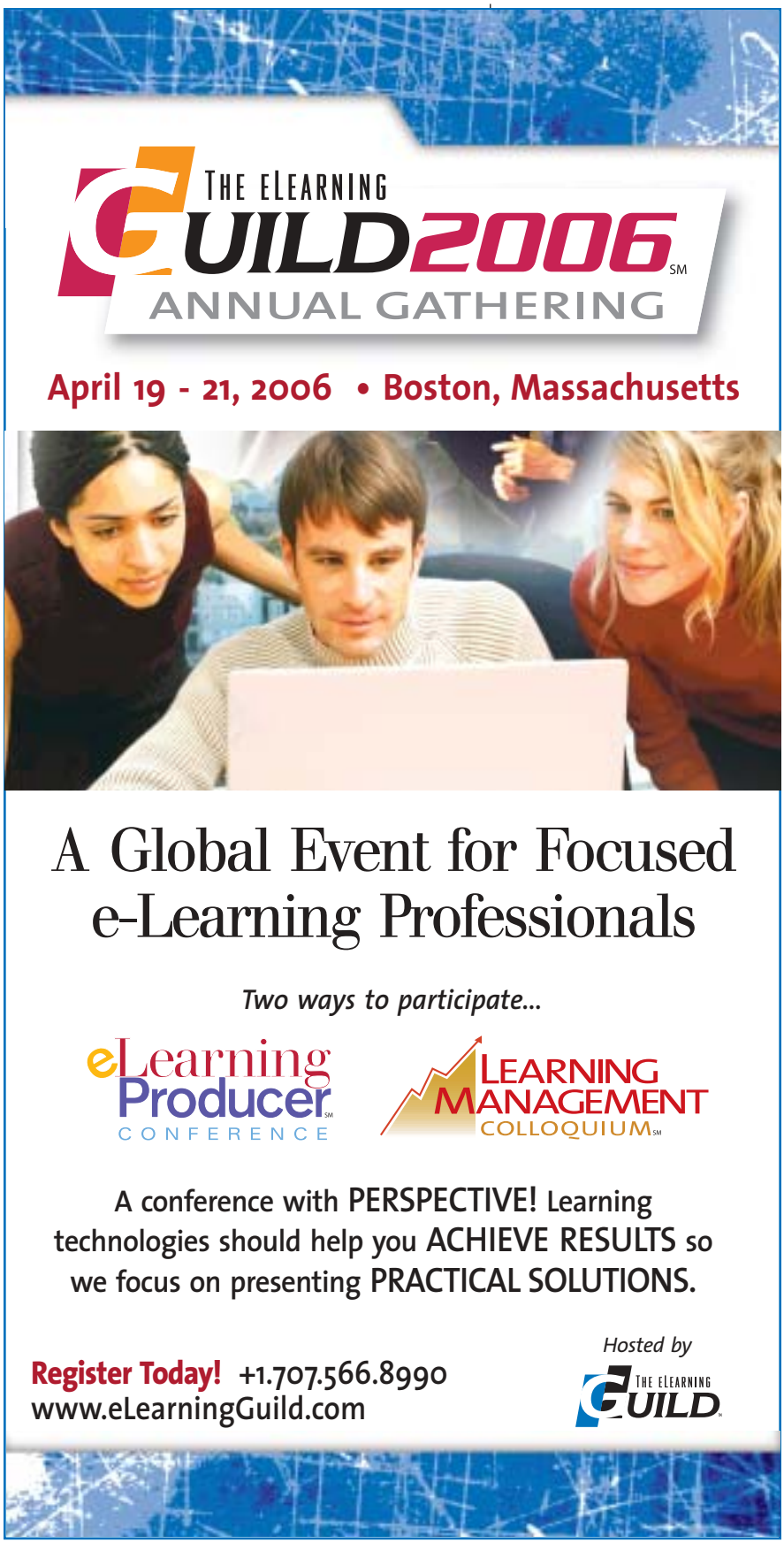
Consider another example. A client asked me to review a compliance course that did a nice job of describing several new mission-critical regulatory requirements. However, the course never actually got around to telling the learner how those guidelines should impact the learner's work. In a given situation, how should I apply the requirement? In this situation, should I interpret the requirement this way or that way? How would I know if I am in violation of the new requirements? What should I do to avoid violating the requirements going forward? In this case, though the content was very important, learners were not going to see it. The course did not make it clear how the content would be relevant to them and their work. Learners were not going to be able to transfer their knowledge of the guidelines to their day-to-day work activities – at least not effectively.

Dust off the manual and wake up the SME.

Documentation content is typically old, out-of-date, static, highly simplistic, and conveniently clear-cut. In real life, the work and the workplace are dynamic, complex, and filled with nuance. For these reasons, designers rely on SMEs for guidance in distinguishing yesterday's documentation from how things really work today. Unfortunately, SMEs do not always know either, and often for the same reasons ... their knowledge of real-life job tasks is too often old, out-of-date, static, highly-simplistic, or too "cut-and-dried."

Connoisseurship vs. experience.

We typically select SMEs for their connoisseurship in an area (their knowledge of facts) and their availability, rather than because of their hands-on experience with a job task. Consider the difference between a wine maker and a wine critic. The wine maker is a practitioner of wine making, while the critic is a connoisseur of wine making. The wine critic may never have made wine. If we were de-



signing training for wine *makers*, would we ask the wine *critic* to be our sole SME? Sounds like a silly idea, yet that's what many of us do. We ask the wine critic to tell us what the wine maker should know about wine making and never actually find out what is involved in making wine – and without ever asking experienced wine makers for input.

Consider the source.

In the example of the compliance course I mentioned earlier, the SME was a compliance officer whose job it was to audit the compliance of salespeople in the field. That staff-level compliance officer *never* actually performed the job of the salesperson, yet he was the only individual who had input regarding course content that was meant for salespeople. How could he possibly describe the real-life situations in which salespeople faced compliance issues, the ways in which those salespeople typically responded in those situations, and other ways in which salespeople could respond more effectively? While his technical knowledge of compliance issues was strong, his knowledge of the work context was not. Clearly, the perspective of the workers was missing from the content gathering process. This is a very common problem. My colleagues and I are placing more emphasis on helping clients select the right combination of SMEs to ensure that the course content is not only technically accurate but also contextually rich (See Stacie Comolli's *Managing the Unmanageable SME* presentation materials for details).

Problem #3: Forgetting your PALs

PAL is an acronym for *Performance*, *Assessment*, and *Learning*. (See Figure 5 on page 8.) In order to design a learning experience that is relevant to the learner, the work, and the workplace, designers should have PAL alignment in their designs. *Performance* refers to on-the-job performance outcomes. *Assessment* refers to the way in which we certify that someone has learned the necessary knowledge and skills to perform a job (i.e., the test). *Learning* refers to the instruction we design for the learner – the content and reinforcement activities that make up the course. A good instructional designer strives to align the learning experience with both the assessment experience and the desired performance outcomes.

If you want to train a customer service representative, for example, on how to handle complaints better while on the phone, then the assessment ought to involve responding to realistic complaints over the phone – or something as close to

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it as we can get. In turn, the training for this skill ought to involve teaching the rep how to respond to frequently-voiced complaints through examples, counter-examples, and opportunities to practice responding to complaints – or something as close to it as we can get. To the extent that learning and assessment align with performance outcomes, the training has potential to influence on-the-job performance. If the alignment is poor, the designer has not optimized the transfer of skills to the workplace, and is therefore likely to have little impact on the workplace. (I presented my ideas on PAL-aligned assessments in *Are Your e-Learners Learning? How to develop online level 2 evaluations quickly and effectively*, listed in the References.

PAL in action: An example.

I recently reviewed a course intended to teach instructional designers how to design blended learning solutions. If you were going to design a performance assessment for these learners, what would the test look like? Given the objective, your assessment would likely involve learners (novice instructional designers) designing blended solutions in response to different learning and performance needs. For example, you might provide some performance outcomes, learning objectives, audience description, and a few other relevant details, and then ask the learner to design a series of learning activities that made use of multiple delivery methods (e.g., live or virtual instructor-led training, stand-alone courseware, assessments, workbooks, and coaching). Such a test would resemble the real-life performance context.

Having designed the performance assessment, you then consider what learning strategies you will employ to prepare these designers for the assessment. Your strategies might include using multiple cases to illustrate the types of design considerations that an instructional designer should think about when trying to determine what delivery methods are best suited for different purposes and situations. You might use the cases to demonstrate how to apply decision-making heuristics (rules of thumb). You might further use cases to enable the learner to practice applying those heuristics to different situations, so you could then provide feedback and help the learner contrast their solution with a best-practice solution.

The point of all this is that you are going to select learning strategies that are in alignment with the performance assessment you designed, which in turn is in alignment with the performance outcomes you identified. Even if your performance assessment is only conceptual (i.e., you never actually create and administer the test), it serves to connect and align your instructional design efforts with your overall performance improvement mission. To do otherwise is to use the technique of "design by wishful thinking" – that is, to design training *hoping* that *maybe* the learner will *somehow* be able to make use of it in improving their job performance. Shame on us when we do that!

The process in action: An experiment

You may be wondering what topic blindness, the source, and PAL alignment have to do with the courseware design process. The connection may be clearer after reading the following true story.

At an instructional design seminar that a colleague and I delivered at the Great Valley chapter of the International Society for Performance Improvement, I split the attendees into six groups for conducting a role-play activity. In a sense, the activity was an informal experiment. Within each group, there was an instructional designer, a SME, a client, and an observer. We gave the person playing the SME a set of topic-oriented content (the agenda for an existing instructor-led course). With half of the groups, we asked the person playing the designer to use a standard approach for collecting content. We asked the designers in the other half to apply a performance-based instructional design (PBID) approach. That was the only difference between the two sets of groups.

We asked the individuals playing the designer role within the three PBID groups to do the following:

1. Observe clients working and speak with them about their work.
2. Ask to have one of them meet with you and the SME to flesh out course content.

When relevance is top of mind, designers include only knowledge and skills that directly contribute to the learner's ability to perform more effectively on the job (at least in the context of workplace learning). They either subordinate or eliminate all other information. Designers avoid including abstract information; rather they present information in the context of how it applies to an authentic job task or activity that the learner performs.

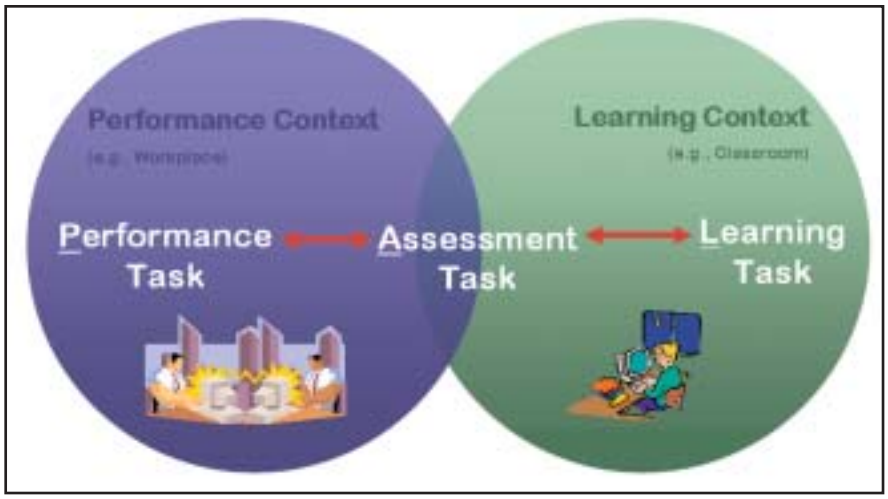

Figure 5
PAL alignment helps to assure relevance.

3. Begin their discussion by identifying the performance outcomes and designing an authentic assessment of those performance outcomes.
4. Then design a course that is focused on the KSAs needed to perform the job.

Afterwards, we debriefed each of the six groups. Table 1, below, presents the results.

What conclusions did we draw from this rudimentary experiment? By simply tweaking a few aspects of the design process, we were able to yield substantially different results. The designers using the standard approach found themselves designing in a vacuum; relying completely on their SMEs and their SME's topic outline; producing large volumes of e-Learning content; designing abstract content and abstract reinforcement exercises; and capping off the learning experience with an abstract memorization test. They were victims of their own process.

Conversely, the designers using the PBID approach had multiple perspectives of the content; they could balance the perspectives of their SME and the existing documentation with the perspectives of the actual workers, and with their own perspectives from having observed the workers working. This, in turn, helped the designers formulate an understanding of the job tasks involved and the skills that needed to be developed, which translated into skill-centric content, reinforcement exercises, and testing.

Recommendations

For the past several years, my colleagues and I have critically examined our processes as part of our quality improvement initiative, and we have identified a number of process improvement recommendations. Here are our top five.

Recommendation #1: Observe workers working

There is much to gain and little to lose by interacting with workers in their work environment. At a minimum, the designer gets an appreciation for who they are as people; what their work conditions are like; how they currently do things; and what concerns they have. When these visits go well, the designer can even walk away with FAQs, common problems, and anecdotes that they can use directly in the course. Recently, three of my designers visited a client's branch office and held a focus group with a group of stockbrokers. Afterwards, they observed different stockbrokers as they conducted cold calls. This half-day visit, in combination with SME meetings, helped the designers produce a two-day-long program on prospecting that rated as highly relevant, meaningful, and engaging by the learners.

Recommendation #2: Get multiple perspectives

Consider that with any set of content, you will often need the perspective of both a connoisseur and a practitioner. Both add value to the process. You need the course to be factually correct, and the connoisseur can help with that. You also need the course to describe how a particular set of facts, rules, and processes should be executed in a real-life situation. For this, you need the perspective of the practitioner. With every engagement, we now ask that there be not only a SME (connoisseur) but also a target learner representative (practitioner) involved in content gathering. We demonstrate to our clients why both perspectives are necessary, and work with clients to select the optimal combination of resources.

Recommendation #3: Design an authentic assessment upfront

Even if you never actually develop and implement the assessment, having an authentic performance assessment conceptualized will help you

I have seen too many courses designed with little, if any, concern for whether the course and its content are relevant to the learner's work context, performance needs, and knowledge and skill gaps. ... [C]ourses need to be worthy of completing, and it seems to me that, too often, they are not worthy. ... [T]he most worthy courses have three key characteristics: they are relevant, meaningful, and engaging.

Table 1 *Debriefing results*

PBID Approach	Standard Approach
Having observed the work taking place and having spoken to the workers, these designers understood the tasks and skills involved and could drive content gathering.	Relying only on the SME and the SME's list of topics, the designers had no concept of what the job entailed, so the designers could only follow the SME's lead.
The skills the workers needed to accomplish the tasks drove the course design.	The topics listed in the SME's agenda drove the course design, so it did not address the skills needed.
The line worker and the SME often provided opposing perspectives, and there was much negotiation going on, with the designer mediating.	The SMEs held all the cards, so they were able to shoot down any attempts by the designer to make the training more skill-oriented.
The scope of the course content was much smaller, because it focused more on the skills that needed to be developed to perform the job.	Course content contained a lot of nice-to-know information and factual information about the job. But despite being longer, the course did not address skill-development needs.
Course design involved hands-on, skill-based learning strategies that actually required the learner to perform job-relevant tasks and get feedback.	Course design involved presentation of abstract concepts, process steps, and rules, followed by abstract reinforcement exercises.
Having designed the authentic assessment upfront, designers then designed the course content and interactions to prepare the learner to perform the assessment tasks.	The assessment was the last thing that the designers designed, and it consisted of abstract multiple-choice questions that tested memorization.

keep your course in alignment with performance outcomes. I often start my content-gathering meetings by asking the SME and target learner representative to help me answer the question: "If you needed to certify that someone could do this job, and had to stake your reputation on it, how would you go about it? What would you ask me to do in order to prove that I could do the job?" I take their response and turn it into an assessment design. At each subsequent meeting, I show them that assessment again to remind all of us of what our target is.

Recommendation #4: Contextualize, contextualize, contextualize

Contextualizing content means making it more situational, more authentic, and easier to transfer to the workplace. We make liberal use of real-life examples, counter-examples, war stories, anecdotes, FAQs, common pitfalls, commentaries from people in the field, and realistic dialogue between avatars (fictitious characters) who represent real workers. We embed our reinforcement exercises in real-life scenarios. We utilize cases and orient training towards problem solving. Rather than merely asking a learner to identify the features of a product, we ask the learner to read about several different potential clients and then identify which feature(s) would be most important to discuss with each client. It's all about putting content into the context of real-life work.

For example, my colleague Ty Johnson (at the time with SoftAssist, Inc.) designed an online math course in which middle- and high-school students learned remedial math skills by pretending to be a teenager working at a deli for the summer. Students had to slice the right amount of corned beef for a virtual deli customer, adjust the order after the customer wanted a third more corned beef, and calculate the correct change. All of the math problems revolved around realistic scenarios like these. Ty designed this award-winning course with applicable skills, not topics, and real-life application, not regurgitation, as his primary concerns. Note that this course was not a high-end simulation; it was in fact a drill-and-practice course consisting of very simple mathematical exercises. From a programming standpoint, it was no more complex than any other tutorial. What made the course relevant, meaningful, and engaging to the young students was the contextualization that Ty established and reinforced throughout the course.

Recommendation #5: Drive content gathering

Novice instructional designers often act as passive recipients of content when interacting with SMEs. The better, more experienced, designers actively drive content gathering. They know what kinds of information and contextual details they need and they take the lead in getting that from their SMEs.

One of our designers, Mae, was preparing to design a course intended to teach new hires how to use a big, online, proprietary database system. On the surface, this may sound like a typical applications training course. In fact, the training wasn't just about teaching people the keystrokes needed to accomplish different tasks. Rather, the training also needed to help learners understand how to use the database in the context of their jobs and the processes they were responsible for executing. Once Mae understood the scope and intent of the content, she designed a content gathering tool (shown in Figure 6, below).

The tool provided space to detail tasks and their corresponding steps, as well as information about who performs the task and in what situations. The contextual information included pitfalls and problems that workers commonly run into, specific examples that demonstrate positive consequences of

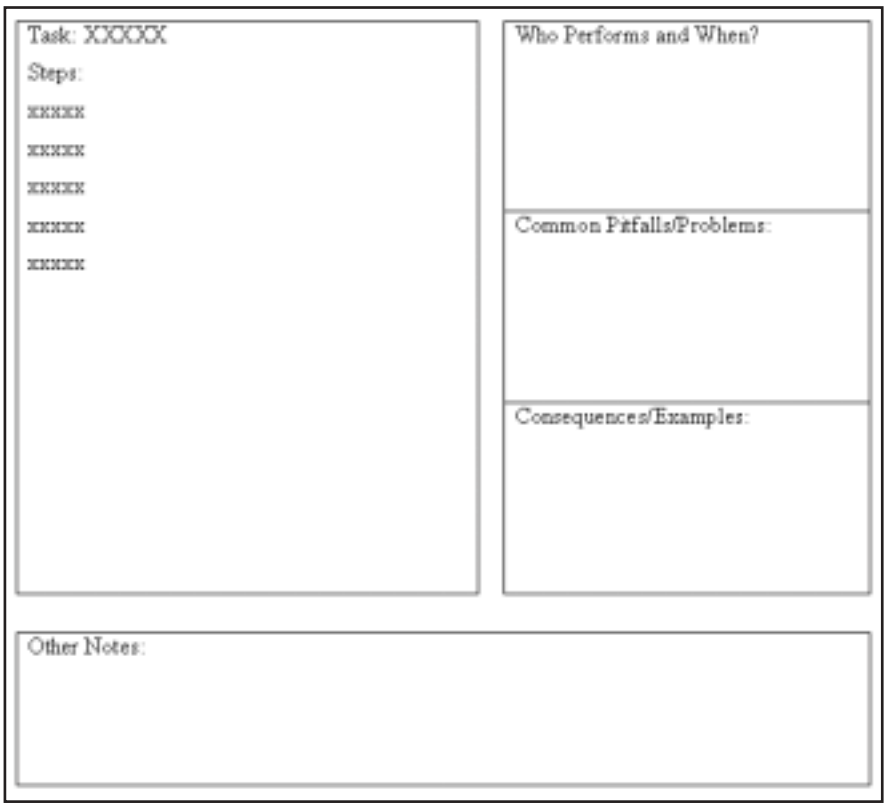

Figure 6
This content gathering tool helps designers stay proactive when working with SMEs.

doing things correctly and negative consequences of doing things incorrectly, and then space for additional notes (e.g., for tips, jargon, policy notes, and other tangential information). Imagine an 80-page document with each page using this format and each page corresponding to one of 80 different tasks that new hires needed to learn.

After creating the tool, the designer populated it with what she initially knew about the content (which was not very much). At her first content gathering meeting, she was able to use the tool to describe to her SME what information she would need to gather from him. They had a baseline for getting started. After the first meeting, she added the new content and sent the document back to the SME to review in preparation for the next meeting. They continued this cycle until all of the content was gathered and verified. Along the way, the SME realized he would not be able to provide all of the contextual information, so he brought in people with more field experience to fill in those gaps.

The SME appreciated the structure and having a sense of what blanks needed filling. More importantly, it enabled Mae to ensure that she got what she needed in order to design a course that contained the right level of contextual detail. It also helped her take a leadership position in driving content gathering.

Conclusion

Good processes set the stage for extraordinary results. Think in terms of developing applicable skills through learning experiences that are task-oriented, rather than in terms of transmitting knowledge through topics that are fact-oriented. Instead of creating a topic outline and using that to generate your learning objectives, go out and observe workers working and talk to them about their work.

Then, use that insight and the continuing input of your SMEs and target learners to create a high-fidelity performance assessment. Allow the assessment design to drive your design of the learning experience itself. Within the course itself, make the content more situational, more authentic, and easier to transfer to the workplace. Contextualize both your presentation of information (e.g., present ideas through dialog rather than through a bulleted list) and your reinforcement exercises (e.g., by asking learners to make decisions within the context of a given situation).

Take a leadership role in gathering content by knowing what you need from your SME and structuring your effort accordingly. This will ensure that you get the contextual information you need about

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the work and the workplace to design a course that affects performance. Put the time into getting the right content and context, and then design with performance outcomes in mind, and you will create a more relevant, meaningful, and engaging course. We have challenged our designers and ourselves to implement these recommendations and have noticed substantive improvement in the quality of our courses and the retention rates that our clients experience.

To answer the brave person at the T-Learning conference in Philadelphia, who asked why Web-based training courses are often so poorly designed, I say that our process is largely to blame for the poor quality of our products. That does not take us designers off the hook, however. We need to show more courage by employing processes that promote better design. Rather than passively relying on documentation and SMEs for all of the answers, we need to investigate the workplace for ourselves and insist on greater input from the target learners. Most importantly, we need to educate our clients and set expectations more effectively. Our clients also need to be willing to give us access to observe and talk to workers working, to modify strategies on the basis of target learner input, and to allow more time for these things to happen early in the process (before storyboarding and programming costs are incurred). The buck needs to stop somewhere, and so I say, **I** am the reason my Web-based training courses are designed poorly, and **I** am committed to doing better. Now how about you?

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