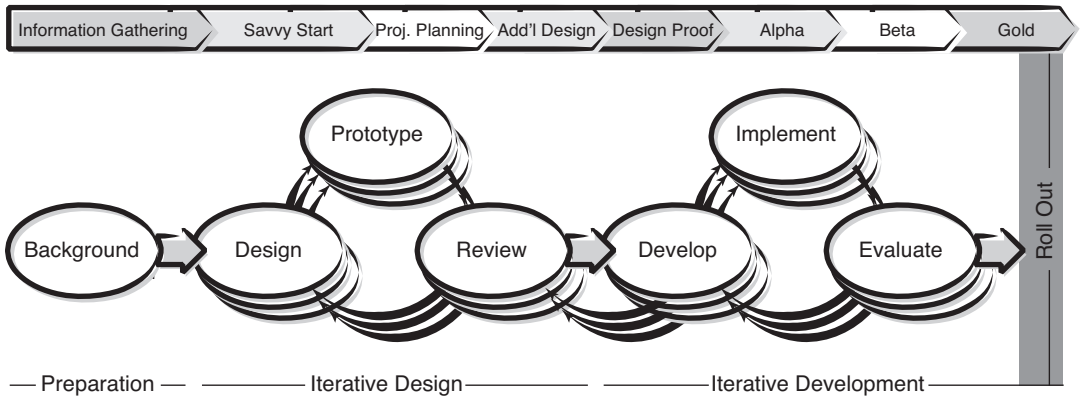
Michael Allen's e-Learning Library

Creating Successful e-Learning

A Rapid System for Getting It Right First Time, Every Time



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About this book

Why is this topic important?

e-Learning represents an extraordinary opportunity for individuals and organizations. With its low-cost delivery, interactive capabilities, and 24/7 global accessibility, it provides convenient and affordable opportunities for skills and career growth. e-Learning can help both individuals and organizations realize more of their potential and gain a better understanding of the world around us. It can lead to success and a happier, more satisfying life.

Unfortunately, much of today's e-learning falls far short of its potential. Instead of assisting learners and blending effectively with other learning aids, it simply throws out overwhelming amounts of information. It fails to adapt to individual learner needs, provide meaningful learning events, and exercise new skills to the point of proficiency.

What can you achieve with this book?

This is the first and foundational book of a forthcoming series of short books that will guide you through the many tasks of creating worthwhile e-learning. Although the tasks are all interrelated, each book focuses on a single component—with the exception of this book. As a foundation, this book provides an overview of the entire process of creating powerful e-learning and it provides details for defining an e-learning project, conducting a Savvy Start, and evaluating iterative application releases.

By applying the techniques presented in this book, all based on decades of award-winning work by pioneers, experts, and leaders in the field of e-learning, you will be able to produce much more effective e-learning applications.

How is this book organized?

There are three parts. The first part includes real-world scenarios that represent the challenges e-learning projects often face. Success in

e-learning comes not from dealing with project design and development as an academic exercise, but from recognizing and managing the context and leading the many individuals involved.

The second part reviews problems with typical design processes used and outlines departures needed. An iterative approach, use of rapid prototyping, and involvement of key stakeholders at the right times are keys to today's successful designs.

The third part details the process of iterative design supported by rapid prototyping. It includes an agenda with annotated events to help you conduct dynamic design sessions. A discussion of iterative development, which must be closely coupled with iterative design, defines iterative releases and includes detailed evaluation checklists.

About the library series

After success with Authorware, Inc. and Macromedia, I felt that I had made a contribution to learning that would satisfy me through retirement. And retire Mary Ann and I did . . . for a few months.

But as my colleagues and I observed what happened with tools that made development of interactive learning systems so much easier to master, it was clear the job wasn't done. Instead of wondrously varied instructional paradigms burgeoning forth, offering more learning fun and effectiveness to the benefit of people and organizations everywhere, we found dry, boring, pedantic presentation of content followed by posttests. The very model of instruction that was drudgery without technology was being replicated and inflicted on ever greater numbers of captive audiences.

Making technology easier to use provided the means, but not the guidance necessary to use it well. To atone for this gross oversight on my part, I formed Allen Interactions in 1993 with a few of my closest and most talented friends in e-learning. Our mission was and is to help everyone and anyone produce better technology-enhanced learning experiences. We established multiple studios within our company so that these teams of artisans could build long-term relationships with each other and their clients. Studios develop great internal efficiencies and, most importantly, get to understand their clients' organizations and performance needs intimately—sometimes better than clients understand them themselves.

Although our studios compete in the custom development arena, we also share our best practices openly and freely. We hope our award-winning applications will serve as models for others to emulate. We teach and mentor in-house organizations who aspire to create great learning applications. And, in close association with the American Society for Training & Development (ASTD), we offer certificate programs to help others develop effective design and development skills.

This series of books is yet another way we are doing our best to help advance the field of technology-enhanced learning. I've not intentionally

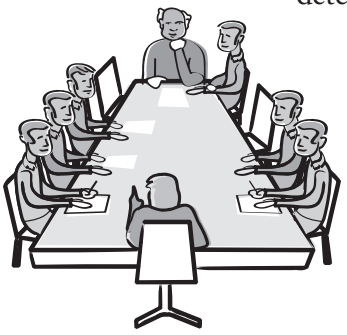
held back any secrets in putting forth the best practices our studios are continually enhancing.

This, the first book in the series, presents the foundational process of successive approximation. Six books are planned for this library, each to be focused on one major aspect of the process of designing and developing great e-learning applications. I plan to address instructional design, project management, deployment, and more. When the series is compiled, I hope it will be a useful tool for developing great and valuable learning experiences.

Contents

4 Grasping the Whole Challenge

Organizations are as unique as their constituents. Although they may face similar challenges as other organizations, their individual experience, personalities, and problem-solving styles determine what works and what doesn't work for them. Individuals determine whether smart mistakes are seen as progress or intolerable performance. They determine whether simply following the rules is success or whether achieving targeted outcomes is.



Developing a successful training program is a complex challenge. It's made far more complex, unfortunately, because it must typically be created in a context of many diverse interests and address a number of personal and bureaucratic goals as well. Any process that ignores the total context, its subtleties and its effects, is unlikely to succeed.

Rapid reader

- A successful process focuses not only on instructional design and development, but also on helping the organization define its greatest needs and opportunities.
- Seven typical, but bad, assumptions about instructional product development are listed.
- It's critical to get both the support and participation of the right people, not just their delegates.

Real-world contexts

Jim Sanders, VP of Sales at Step Up Ladders, feels uncertain. As a leader, it's painful to him when he lacks confidence in his decision-making readiness. He's heard the many claims for what e-learning can do, but they have the ring of hyperbole. He isn't a trainer and probably hasn't experienced a lot of training to which he would accredit his personal success. But if e-learning could meet his needs and cut costs, he'd feel accountable for bypassing an important opportunity. He's not afraid of risks, but he is afraid of wasting valuable time and resources. What's he to do?

Working at a university hospital, Robin Taylor has highly motivated, rushed and impatient learners. There is complex legal regulation and high performance liability. As a project manager and former instructional designer, she's energized by her organization's trust the $50,000 project budget conveys and is eager to lead her in-house team of instructors in converting instructor-led training to e-learning. Almost instantly, however, she discovered that she's in a crossfire between

the administration's goals and the instructors'. How does she solve this problem and also develop a quality training solution that stands up to stringent scrutiny?

Zanick Pharmaceuticals directed George Sharpe to prove that e-learning can work for them. He's never developed e-learning before and knows from experience with some bad off-the-shelf courseware that e-learning isn't always a good thing. Employees didn't like it, and the desired outcome performance levels weren't achieved. The CLO has her eyes on him, and his failure could mean the loss of his job—and maybe even hers. Should he risk admitting he doesn't know how to develop their first project internally and bring in an outside vendor, or should he just give it his best try?

It takes a village…

Jim needs to fess up about his concerns, overcome his disabling notion that training isn't his job, and get the real scoop on e-learning and also learn the strengths and weaknesses of other skill-building approaches. He isn't going to get statistical proof that an as-yet-to-be-developed e-learning program will achieve everything he needs. He's even going to find it hard to get a firm price on what a satisfactory e-learning solution will cost, unless he gets involved. Delegation isolates him from the information he needs to make good decisions. He knows that, but he isn't really fond of training. Trainers never seem as interested in business challenges as they are in their theories, techniques, and whatever else it is they do.

It isn't going to work for Robin or George to go off on their own either, although this is what many training development groups do. Get the funding, disappear, try like heck to meet the schedule and budget. Even if their work received an A rating from e-learning experts, it would be unlikely to meet the organization's highest priority needs or to receive the necessary support. Regardless of your design and project management expertise, you're liable to miss the biggest opportunity by a significant margin if you're deprived of the involvement of those who own the performance challenges, are responsible for achieving goals, and benefit from success.

It takes the involvement and live-in participation of a village to succeed with e-learning. The two-camp approach doesn't work with

management living in one camp, training in another. It would be something like one group being out in front, strategically commanding a battle, while another group was guessing what strategies the command was going to take and being responsible for having the appropriate resources developed and placed as needed. Certain disaster.

Much of the attention devoted to the process of e-learning design and development over the last half-century has focused on organizing content and developing learning programs efficiently. While many of us find inadequacies in typical processes used to develop desired learning experiences, these processes are prone to even worse faults. They tend to exclude and even ignore the camp in command.

Dangerous assumptions

Three dangerous assumptions have led to many failures:

1. WRONG: Managers know what they want and what their people need.

It is, indeed, management's job to know these things, but without recognizing the full range of training possibilities—especially recent technology-enhanced possibilities—managers tend to set anemic, ineffective goals for training.

"Make sure all our clerks know the return policy." Regardless of what is said, management doesn't really care whether clerks know the policy or not. What's important is that the policy be executed properly, courteously, and consistently. This is a different goal, and not a goal that will be achieved simply through having everyone memorize policy.

2. WRONG: Management shouldn't be involved in instructional design.

It's a pretty new thought for both managers and instructional designers that management should be involved in designing training solutions. In fact, most designers work to keep the agnostics out of the consecrated process of learning design.

"They'll just push their personal preferences and agenda, which are often at odds with or just simply irrelevant to what makes a good instructional program." Use of jargon and references to learning theory helps make outsiders uncomfortable and protects the instructional designer's turf.

Unfortunately, it's in the early design activity where many options can be seen and evaluated for the first time. It's an important opportunity to reevaluate the goal and its alignment to top organizational priorities. It's when budgetary and other constraints can be evaluated most effectively and alternatives considered. This is where and when management can and needs to play a vital role.

3. WRONG: It takes extensive and costly research to sufficiently analyze needs to propose appropriate solutions.

Indeed, there's no limit on how much time and effort can be put into up-front analysis. But it's not smart to tarry here, regardless of available capital. The reasons to do this as fast as possible and move on are plentiful. Consider this one. Dynamic organizations have rapidly changing needs. If you have spent a long time analyzing needs, the needs you analyzed and so meticulously documented may no longer be the current or the highest priority needs. You can miss the critical window for developing and delivering training if you're paralyzed by analysis. Quicker, less extensive (and less costly) research can prove to be much more valuable.

Not just any village will do

We need certain participants to speak up at the right times. There's a tendency, whether just to make scheduling meetings easier or to move things along faster, to exclude input from those people who are actually in the best position to provide direction, make binding decisions, and improve the prospects of a successful project.

It's important to get the invitation list right, and not to prejudge the contributions that can be made from different perspectives. By limiting the information you have, you might make progress simpler at first, but there's increased likelihood that you're missing something important. Whether it's going off in the wrong direction or finding later on that you don't have the good will and positive support you need, what appears to be simplification here could be stacking the cards against your success.

More dangerous assumptions

Yes, we have more typical, dangerous assumptions. These assumptions also

frequently lead to the wrong list of participants.

4. WRONG: As instructional designers, we know what learners like and appreciate.

"I'm a person," thinks the designer. "And I was a student for many years too. I know what people like and don't like."

Learners behave differently, use different standards, and value things differently in the various situations in which they find themselves. As we've previously noted, learning and performance contexts strongly influense our perceptions and our behaviors.

Is this mandated training? We expect not to like most things that are mandated. After all, if it were so helpful and pleasant, would it have to be mandated? We often find ourselves looking for faults in anything mandated, almost as an automatic response.

Does it get me a certificate and a higher salary? Does it make my life easier? If I'm not getting anything out this that I want, I'm probably not going to be fully engaged.

Is it using up valuable time and putting me further behind?

Understanding the learner perspective is critical to success in changing behavior. So is realizing that learners differ from each other. They represent a range of perspectives as well as a range of abilities. You can't teach people things they already know; you can only frustrate them in the attempt.

Good designers don't make assumptions here. They don't circumvent learners. They involve them. There's really no other way to a great success.

5. WRONG: Subject-matter experts know what learners will understand.

Being expert in the subject to be learned almost guarantees you will not be able to see things through the eyes and mind of a learner. SMEs are great for validating what we are teaching, and even though they may currently be teaching, I often find a surprising disconnect between what learners find clear and helpful and what SMEs think is helpful instruction.

There's no need to make assumptions here, we should verify everything with the true experts on what learners will understand: the learners.

6. WRONG: Subject-matter experts know what learners need to learn.

It may sound like I'm blaming subject-matter experts for the causes and misfortunes of poor e-learning design. I'm not. No, the problem lies in how we use these valuable human resources.

SMEs can be expected to provide thorough content that is true and accurate. They should be able to identify best practices, performance standards, and typical errors and their causes.

But there is no obligation for training to include all this material nor to organize it in any way similar to the organization that makes best sense to SMEs. In fact, it's highly unlikely that the SME's organization of content will be optimal sequencing for learners.

More importantly, subject-matter experts are not usually expert in the analysis of the behavioral faults of learners. Although they may be able to construct good posttests, SMEs are not typically in a position to know what learners know, what they need to learn, nor what prevents them from performing optimally. Rather, it is those people who supervise performance who are in the optimal position to know and relate to all the details of real-world performance. And, of course, to the performers themselves.

7. WRONG: Learners can't be helpful until we've developed the instruction.

I've already asserted that learners are, indeed, the true experts on what can help them. Their actual responses to designs, not necessarily their verbalized requests and predictions of what would be good, tell us whether the design is successful or not. But we certainly don't want to wait until we've completed the project, exhausted the budget, and run out of time to make changes before we get this feedback.

The solution here is to draw on a mixture of learners—some who have yet to learn the subject and others who have recently learned it. Recent learners can remember not knowing the content and not being able to perform the targeted skills. They can tell us what helped them learn—the meaningful steppingstones and the aha moments.

Learners who have not yet tackled the subject can acquaint us with the typical entry skills, motivations, and computer interface contriv-

ances they can handle. We can test ideas by having them work through prototypes, describe their interest in getting some training, and tell us what they like and don't like about being a part of their organizations. Responses at this point are almost always surprising and extraordinarily helpful for training design.

A clear vision

Ok, what does a review of these dangerous, yet common assumptions tell us? It tells us that getting to the essence of the organization is important, just as is understanding learners and the environment in which they'll work. We need input and actual agreement from a cross section of the organization, which means a group of people who would rarely, if ever, congregate.

Who's coming to dinner?

Probably not the typical collection of guests, but having the right participants will very much determine how successful the event is. Although our guests might be a bit uneasy at first in the mixed group we've invited, they'll come to appreciate getting to know each other's views as they've probably never known them before. They'll quickly realize how valuable this small assembly is and want to do more projects together.

Let's quickly review who needs to participate in the process and why.

Budget makers can't allocate effectively for training projects when they really have no idea of what can and should be accomplished—and without adequate funding, what can't and won't be accomplished. They need to be there, in person, to learn and guide.

Our party needs to include the ***person who owns the performance problem***, as this is often, and unfortunately, not the budget maker. We're also hoping to have a ***person who supervises the performance*** of people we're teaching. In a university, college, or school, we must generally entrust the teacher or professor to reflect both of these viewpoints.

Our event also needs to include ***someone who knows the content thoroughly*** to be sure we impart best practices and valid information. Our guest list needs to include ***candidate learners*** to help make sure that what we are doing is appealing, interesting, understandable, and usable to them. ***Recent learners*** would be most welcome to give us insights about what helped them

learn this specific content and what was a hindrance. In some instances, recent learners are more helpful than almost anyone else.

Finally, the organization's ***project leader*** needs to be present, as this person will be the point of contact for the e-learning team, helping to get information, schedule reviews, and do many tasks, most of which are time-sensitive. This person needs not only the responsibility but also the clout to make things happen.

Involvement of each of these representatives is truly critical. The discussion can't be just the training group talking among themselves.

Meeting the challenge

The obvious question is how to do all this efficiently. How can we educate non-educators about the possibilities and support needs of alternative solutions? How can we include divergent opinions, reach consensus, and win support for a solution everyone understands?

The answer is a process that recognizes the contextual complexity of solution development, the typical need for client education, and the need for invention as opposed to simple principle application. The answer is *Successive Approximation.*

About Allen Interactions Inc.

Allen Interactions was formed by learning technology pioneers who have continuously created precedent-setting learning solutions since the late 1960s. Their award-winning custom design and development services have been commissioned by Apple Computer, American Express, Bank of America, Boston Scientific, Delta Air Lines, Ecolab, IBM, Medtronic, Merck, Motorola, Nextel, UPS, and hundreds of other leading corporations.

Working with IBM and then with Control Data Corporation, Michael Allen led the development of the first two widely used LMS systems. His pioneering work on visual authoring systems led to the ground-breaking introduction of Authorware, elevated the level of interactivity that educators could develop, and launched Macromedia, together with a new industry of interactive multimedia tools.

Now, his studios at Allen Interactions carry on the search for more meaningful, memorable, and motivational instructional paradigms, faster and lower-cost methods of designing and building technology-enhanced learning solutions, and ways to share their discoveries with those interested in more effective learning.

About the Author

Starting his work in technology-enhanced learning at Cornell College in the late 1960s, he has been developing instructional paradigms, systems, and innovative tools ever since. Michael W. Allen holds M.A. and Ph.D. degrees in educational psychology from The Ohio State University. He is an adjunct associate professor at the University of Minnesota Medical School in the Department of Family Medicine and Community Health.

Active in e-learning organizations, publishing, and speaking, he has consulted internationally with governments and major corporations on the use of technology for learning. Dr. Allen created the first commercial LMS products used internationally, the precedent-setting visual authoring tool, Authorware, and countless instructional applications. His first book, Michael Allen's Guide to e-Learning: Building interactive, fun, and effective learning programs for any company, has been praised by beginners and experts alike. Dr. Allen's advice is based on unrivaled experience and insights.

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