Complimentary Preface From

LEAVING ADDIE FOR SAM

An Agile Model for Developing the Best Learning Experiences

ASTD

MICHAEL ALLEN
with Richard Sites
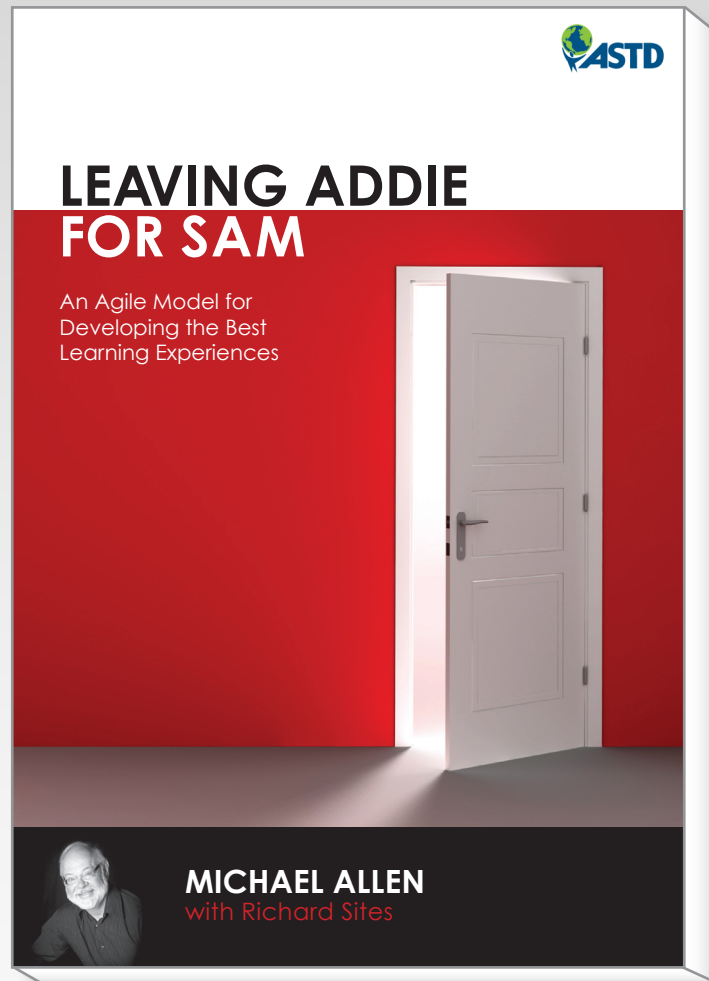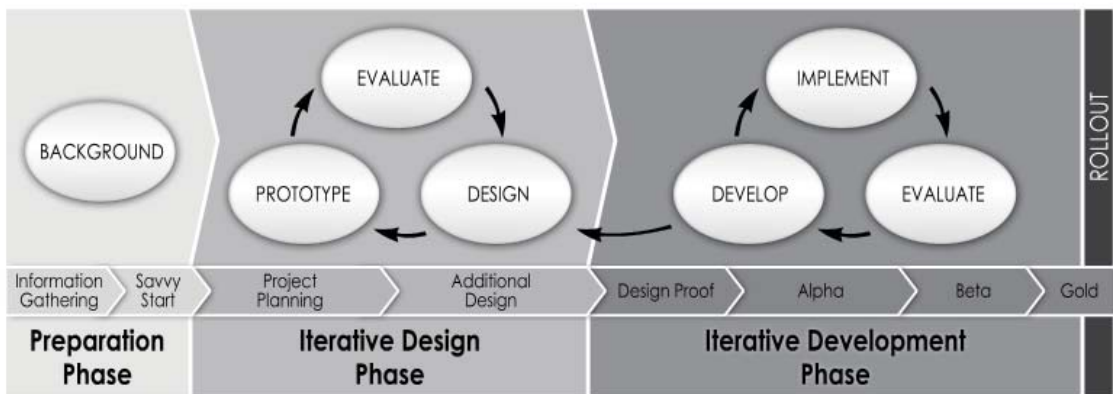
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Leaving ADDIE for SAM

Faster, Better Learning Product Development

Michael Allen
With Richard Sites

Acknowledgements

PREFACE

Leave ADDIE, you say? And why would I do that?

If this is your question, I'm quite inclined to say you should stick with ADDIE. I'm very supportive of any process that reliably and efficiently produces desired results. If ADDIE does this for you, then you're a fortunate person. You have your tool, your comfort zone, your success, and I do sincerely congratulate you.

I mean it.

I used to use and teach the ADDIE process, or what I considered something of *the standard* ADDIE process. I taught it with assurance and conviction. The ADDIE process of analysis, design, development, implementation, and evaluation is logical, thoughtful, and comprehensive. There's little in the process one can argue with in terms of relevance and importance.

Did it work?

Well, yes and no. As I'll describe in a moment, I witnessed its use in a variety of settings over a great many projects. It produced products, yes. It gave managers an understandable process that appeared quite manageable. It had measures of progress threaded through it, yielding status data to report. There's a lot to like about it from a managerial point of view. It's definitely left-brained—comforting to the concrete thinker.

But did it produce good learning products? Did teams feel productive? Were they proud of their work? I have to say no, not so often in what I've seen.

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My career in instructional product development began as is typical, with a PhD in educational psychology. I had the uncanny good fortunate of meandering through rare opportunities to learn from putting instructional theories and knowledge about human learning to work. Even in my graduate program, I had a unique opportunity to work with a newly built National Science Foundation center designed to demonstrate and validate the latest in instructional approaches and technology. Working with the center I had a chance to experiment and ultimately develop the means to guide learners individually, to help them discover their personal learning style, to continually measure and fortify their growing confidence, and to prepare them for success.

I also received grant support from the psychology department to investigate uses of technology to help unwieldy numbers of freshman psychology students work at an individualized pace toward mastery of the subject. Then, with support from IBM, I developed software to analyze student progress and validate which instructional paradigms were most effective with particular learning styles and to measure assessment validity. After I graduated from the PhD program, the university put me in a rare and wonderful position—teaching faculty members the means of offering better learning experiences to their students.

Later, with an offer no one could refuse, I went to work with Control Data's PLATO project to develop computer-assisted learning for Control Data Institute enrollees. As Control Data's work with PLATO grew and our staff expanded from a couple dozen to hundreds, everyone's work became more specialized. Becoming director of research and development, a position I held for a decade, I focused primarily on two areas: research on human learning and tools for curriculum development/management. A group separate from mine was formed solely for courseware production.

In my current company formed after developing Authorware, taking it to market, and combining with Macromind/Paracomp to form Macromedia, I have built custom learning solution studios on both U.S. coasts and in the Midwest. For more than 18 years we have produced huge volumes of instructional products, including instructor-led courses, e-learning, and blended programs. The work of our studios has our lobby proudly overflowing with awards and superlative commendations.

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The point of this embarrassing reminiscence is that I've had an opportunity to design, build, manage, and observe the production of an extraordinary number of instructional products: education and training, large budget and small, complex and simple, technology and no

technology, successful and not. My hope in setting fingers to keyboard and mouse here is to channel toward greater success out of the tremendous effort that goes into each and every instructional product.

At Control Data, where a huge courseware production organization was built, a cornerstone project was undertaken. It was the development of a curriculum to teach effective courseware design and development—essentially the ADDIE of analysis, design, development, implementation, and evaluation. While I'd like to digress into a discussion of the irony of how this ill-fated undertaking struggled painfully to launch an instructionally viable and useful product, I should only state that after missing deadline after deadline, repeatedly exceeding budget, and producing power struggles with career-threatening tensions, it started my questioning of ADDIE. As far as I can recall, very few—if any—of the participants in this project were proud of the product produced and wished to claim credit for it. If even the ADDIE experts couldn't use ADDIE to teach ADDIE, something was amiss.

As with the majority of ADDIE projects, a product did emerge. ADDIE is pretty good at assuring something will emerge. The product went through at least several major revisions after its introduction, but I don't believe it is unfair to assess the project as more of a valiant effort than a stunning success. This shouldn't have been the case, and I hope, dear reader, it won't be yours.

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Good instruction is inspirational. It captures both the power of knowledge and skill as well as the joy of becoming competent. Good learning experiences aren't just about facts, they are about becoming—becoming a more proficient, capable, and valuable person. To my taste, ADDIE—a process that comprises many valuable tasks—fails to recognize the necessary creativeness and inventiveness of the work, to allow for and support exploration and changing ideas that need to arise within and as part of the process.

A good and wise friend advised me many years ago when I was designing and building an authoring system for PLATO: "It's too early to build a tool until you've defined the process it is intended to support," he said. This fine advice led me to seriously question ADDIE, especially in the wake of the products I saw it producing and the tension people felt using it. This questioning ultimately led me to advice of my own. *It's too early to define a process unless you've defined the product you want it to produce.* The starting place is to decide what we want in our instructional products.

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Meaningful, memorable, and motivational. Many readers will know I had to say it sooner or later, as these are the characteristics I feel are imperative for the success of instructional events. Lacking any of these three, an instructional experience fails to be what it should and needs to be. Today, this seems like a certainty to me (although I strongly endorsed ADDIE years ago, too, so we need to be careful). But, yes, I shout it out at every chance. Meaningful, memorable, motivational. The big three Ms.

Knowing that the destination is the big three Ms, we can tailor a process that pushes in the right direction. It's in the pursuit of just such a process that Successive Approximation was born.

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This is not a book about instructional design—at least it wasn't intended to be. Because product and process are so closely interdependent, it was impossible to write all that needed to be shared without overlapping into topics of instructional design more than once. I avow that I wrote and removed many segments in which I couldn't avoid delving into instructional design. I had to write them for my own satisfaction. But then as they seemed too preachy and muddying, I pulled them. Indeed, I've written about instructional design to the best of my ability many other places, and for those interested in my opinions, they aren't hard to find.

But even with such attempts at considerate weeding, it's not all gone. I can't help but remind us all, over and over again, that instruction isn't primarily about presenting information. And learning isn't primarily about knowing things. The goal is always about performance. *What can people do with their new knowledge? What skills are necessary for success?* One never succeeds without doing something. Deciding not to do something is, of course, making the decision not to—and thus *is* doing something, the something one might have learned was appropriate. Follow? Even in academia, we want our students to be good problem solvers and good conversationalists. We want them to realize when the knowledge they have is applicable, and we want them to apply it successfully. It's about doing things.

So I hope you will tolerate my occasional lapses into topics of instructional design. I believe they are relevant to understanding why characteristics of the successive approximation process are important. I hope also that you will forgive my tendency to focus on e-learning. E-Learning products tend to fly solo—to stand more on their own unaided by a sympathetic and charismatic instructor who can fill in the gaps, provide instant explanations and remediation, and motivate those who need to keep focused and energized. If the product doesn't do it, it won't get done.

E-Learning therefore requires the most care in design and construction. Perhaps it's the best test of whether a process can produce desired products. But please don't read, through the fault of my biased attention to e-learning, that successive approximation is appropriate only for e-learning or is itself biased toward it. Indeed, successive approximation is, in my experience, a far superlative process for the production of any instructional product. I hope very much that you will find it so yourself.

About the Author

Michael Allen

Michael Allen, PhD, is a recognized leader in e-learning. He has made career-long contributions by inventing and sharing effective interactive multimedia learning strategies and authoring tools. He has nearly 45 years of professional, academic, and corporate experience in teaching, developing, and marketing interactive learning and performance support systems; and he has led teams of doctorate-level specialists in learning research, instructional design, computer-based training, and human engineering. For decades, he has concentrated on defining unique methods of instructional design and development that provide meaningful and memorable learning experiences through "true" cognitive interactivity. He shares his insights through his writing, speaking, seminars, and examples. He is now, once again, developing software to ease the development of excellent learning experiences and help children creatively express "what they know."

In May 2011, he received ASTD's Distinguished Contribution to Workplace Learning and Performance Award. In 2012, Allen was selected by The National Ethnic Coalition of Organizations (NECO) Advisory Committee as a recipient of the 2012 Ellis Island Medal of Honor.

Allen is currently chairman & CEO of Allen Interactions Inc. His clients include the most known and respected public corporations and professional associations.

Allen was the principal architect and designer of Control Data Corporation's famous PLATO computer-based education system used around the world. He was the founder, and former chairman of Authorware, Inc. and also the primary architect of *Authorware Professional*, which was based on Allen's extensive research on creativity and creative problem-solving. It became a groundbreaking authoring tool combining power and ease of use, and ultimately the industry standard. Authorware, Inc. merged with Macromind/Paracomp to become Macromedia, which was later acquired by Adobe.

Allen is once again determined to conquer the perplexing idiosyncrasies and complexities of interactive media so that all people can share their knowledge, experience, and insights through it. Just now coming on the market is ZebraZapps—a revolutionary cloud-based authoring and publishing platform that allows anyone to create and deploy compelling interactive multimedia in a way that nothing else can. In fact, experiments have shown that 10-year-olds can create media-rich interactive applications as homework that demonstrate

what they know. Even high-end programmers cannot program such applications in the time children can build them with Zebra.

His first book, *Michael Allen's Guide to e-Learning: Building Interactive, Fun, and Effective Learning Programs for Any Company,* has been praised by industry experts as the e-learning textbook that everyone, from beginners to experts, must have. It is the primary text for ASTD's e-learning design certificate programs and countless other programs worldwide. The *Guide* served as the jumping off point for *Michael Allen's e-Learning Series*, a six-volume series covering a range of topics with three books currently complete. Michael Allen also serves as editor of *Michael Allen's e-Learning Annual Series* which has been noted as a "phenomenal resource" for scholars and practitioners alike, carrying up-to-date controversies from renowned experts.

Allen holds MA and PhD degrees in educational psychology from The Ohio State University. He is an adjunct professor at the University of Minnesota School of Medicine and is currently working in association with the university and the National Institutes of Health to develop interactive interventions to reduce the spread of HIV and AIDS.

Richard Sites

Richard H. Sites has spent the past 15 years designing and implementing web-based training and tools to support improved workplace performance. His efforts have been in both academia and private industry, including working with many Fortune 500 companies. He is Vice President of Client Services for Allen Interactions Inc., where he is responsible for promoting value-driven consulting and design throughout all Allen Interactions partnerships.

Before joining Allen Interactions, Richard held a faculty position and served as the director of the Educator Performance Institute at the University of West Florida. Richard was the lead designer of a nationally marketed web-based training system to support educators with the design of standards-based instruction. In addition to his e-learning experience, Richard's 12 years of instructional experience have been focused on high quality e-learning, including the design and development of various nationally recognized educator training products, teaching graduate courses in instructional design and media, and speeches at national and regional educational conferences.

Richard earned a doctorate of education in curriculum and instruction, specializing in instructional technology, from the University of West Florida. His doctoral research focused on the design of a model for scaffolding in a web-based performance support system. Richard also earned a master's of education and a bachelor's of business administration.

About Allen Interactions

Allen Interactions has pioneered the e-learning industry since the first authoring tools were developed in 1985. The company was founded by CEO, Michael Allen, and associates in 1993 to assist multimedia professionals in building engaging interactive learning solutions. On the leading edge for two decades, they have invented and reinvented the most powerful learning paradigms, cost-effective tools, and successful creative processes in the industry.

Allen Interactions specialties include e-learning, blended learning, and a wide variety of technology-enabled solutions customized for specific performance improvement. Other services include consulting and training services, and tool and software development. Their award-winning custom design and development services have been commissioned by Apple, American Express, Bank of America, Boston Scientific, Comcast, Delta Air Lines, Disney, Ecolab, Essilor, Hilton, HSBC, IBM, Medtronic, Merck, Microsoft, Motorola, Nextel, UPS, Travelocity, and hundreds of other leading corporations.

Allen Interactions is home to the revolutionary new authoring system called ZebraZapps. Another remarkable vision of Allen, ZebraZapps is a revolutionary cloud-based authoring system that gives anyone, from experienced developers to children, the ability to create rich interactive media applications, quickly and easily. Applications created with ZebraZapps can be shared, published, and even sold in the online shops. From concept to creation, ZebraZapps provides a fun, fast, what-you-see-is-what-you-get (WYSIWYG) interface.

Allen Interactions has offices across the country, with corporate headquarters in Minnesota. They can be reached at alleninteractions.com or by phone at (800) 799-6280.

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