

## Foreword

One of the complexities about the field of learning objects is that it is highly organized yet highly diverse. As a veteran participant in and observer of the evolution of learning objects, it is clear to me that the promise afforded by these approaches is great and the applications many. It is also clear to me that how one might describe the promise of learning objects depends to a large extent on the applications to which you wish to put them.

Much of the early work in learning objects came from two related but almost competing directions: the proponents of e-learning, especially those who wished to meet the needs of corporations for rapid deployment of training; and those whose focus was on searching and finding learning objects based on carefully constructed metadata schema intended to make learning objects work seamlessly with learning management systems. For both groups, the objects themselves could take many forms, but were generally to be housed in a database called a repository. Each camp envisioned that learning objects would revolutionize course design and dramatically lower the costs of training and instruction. Rapid course assembly, “drag and drop” course design, just-in time learning, and a growing collection of shared materials (both within and outside intranets) were all part of the emerging vision.

Colleges and universities were quick to embrace the construction of metadata and repositories for learning objects, and as they did, repositories specializing in materials to support educational curricula began to emerge. The forerunner of all of them was the Educational Object Economy (EOE), a collection of java-based applets useful in primarily engineering and scientific applications housed in a framework based on the idea of exchange. The Multimedia Educational Resource for Learning and Online Teaching (MERLOT) soon followed, and extended that work to the social sciences and other disciplines.

Now with nearly a decade of development and experience behind us, it is fair to say that educational institutions have clearly embraced the idea of applying reusable learning objects to the development of content. As a result, learning objects have entered the mainstream of both e-learning and educational practice. Nonetheless, they have been applied in very different ways. There is a growing dichotomy between the needs and practices of e-learning and instruction as it relates to reusable learning materials.

Early proponents of learning objects often described them as a sort of “Lego” block, which could be snapped together with other blocks to create a curriculum. This metaphor persists in e-learning circles, but has fallen away in educational practice with the realization that a disciplinary context is often critical. As learning objects came to be applied more and more in educational contexts, the theoretical emphasis came to be placed more on reusability than adaptability, and the practical focus was to place learning objects within rather than across contexts and disciplines. At the same time, it became clear that educational learning objects were moving away from the “Lego” metaphor. While the objects being created for education were quite reusable, they were often very complex and detailed.

Today, educational learning objects are typically very rich and deep, and many carry the load of an entire curricular component. In contrast, learning objects for e-learning continue to hold to the vision of rapid course assembly, and so tend to stress adaptability more than do educational learning objects. If we were to create a new metaphor, it might be that e-learning objects are more like atoms than the complex molecules being assembled for instruction.

Much has been written about the e-learning side and training applications for learning objects, but little has appeared in print about how learning objects are being used within a curriculum. The essential value and contribution of this book, *Learning Objects for Instruction: Design and Evaluation*, is that it addresses that need very handily.

Editor Pamela T. Northrup has taken on the challenge of detailing the instructional applications of learning objects, and has assembled a group of authors who have considerable experience with the application of learning objects. To illustrate the broad applicability of these approaches, she has purposely taken a multidisciplinary approach in structuring the volume. She has organized the book into three broad areas that provide not only the theoretical underpinnings of the field, but also detailed case studies that emphasize the applications of learning objects across a number of disciplines, and a survey of emerging tools for creating learning objects.

In so doing, Northrup has filled an important gap in the literature, and readers will find much of value, no matter what their background in learning objects may be.

For those to whom this area is new, the comprehensive introduction to learning objects looks at not only the history of the field, but also several key aspects in depth. This introduction covers all the essential dimensions of learning object theory in a way practitioners will find very valuable and accessible. Many readers, especially

those looking for a solid foundation in the field, will want to read the volume as a whole. Those who are more familiar with the theoretical underpinnings of learning objects will appreciate the eight detailed case studies that form the core of the volume. All readers will benefit from the descriptions of tools that close the volume.

The strength of *Learning Objects for Instruction: Design and Evaluation* lies in its focus on practice, and how learning objects are actually being applied in instructional contexts. The chapters detail these applications in ways that are easily generalizable, and highlight approaches that anyone interested in developing educational learning objects will appreciate. The chapters on the kinds of tools emerging to support the development of learning objects highlight how these tools have envisioned and tried to meet the needs of authors. Those who are developing or considering the development of new toolsets will benefit from the descriptions of how these tools were conceptualized, and the requirements they aimed to address.

Anyone interested in the educational applications of learning objects will want to place *Learning Objects for Instruction: Design and Evaluation* on a handy bookshelf, within easy reach, for it is one of those uniquely useful books you'll want to revisit often!

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**Laurence F. Johnson** is chief executive officer of the New Media Consortium (NMC), an international consortium of more than 200 world-class universities, colleges, museums, research centers, and technology companies dedicated to using new technologies to inspire, energize, stimulate, and support learning and creative expression. He is an acknowledged expert on the effective application of new media in many contexts, and has worked extensively to build common ground among museums and universities across North America and in more than a dozen other countries. He is the author of a number of important books, monographs, and articles exploring emerging trends and issues related to that work.

In his current post, Dr. Johnson routinely brings visionaries and thought leaders from across the globe together to define and explore new ways of thinking about and using technology, and to examine emerging trends and issues. The NMC's annual Horizon Report has become one of the leading tools used by senior executives in universities and museums to set priorities for technology planning. NMC summits and large-scale projects have helped set the agenda for topics such as visual literacy, learning objects, educational gaming, the future of scholarship, and the new Web. Recent examples are the NMC's high-profile experimental campus in the virtual world of Second Life and its leadership role in the MacArthur Foundation Series on Digital Media and Learning.

Having served as president and senior executive at institutions in both the higher education and not-for-profit realms, Dr. Johnson has more than 25 years of experience leading high-profile, high-stakes projects. His educational background includes an MBA in finance and a PhD in education that focused on research and evaluation. Among other recognitions, Dr. Johnson has been honored as a distinguished graduate by the University of Texas at Austin.