February 16
2004

THE eLEARNING DEVELOPERS' JOURNAL™

Strategies and Techniques for Designers, Developers, and Managers of eLearning

THIS WEEK — DESIGN STRATEGIES

XML and Content Reuse Systems for Instructional Design

Part III: Creating a Unified Content Strategy

BY HENRY MEYERDING

The previous two articles in this series discussed the basics of XML, and the taxonomies, processes, and tools used for generating and modifying content. XML is the organizational methodology used to construct repositories of learning objects that have been created with taxonomy.

The learning taxonomy is used to classify information according to a set of rules. Repositories for these derived learning objects represent the culmination of a gradual process that began with simple file sharing. The reason for entering into all this extra work is to allow the learning organization to be capable of responding more quickly and flexibly to the needs of students. Different tools can be used and none is perfect. Proper training and supervision in how the tools are used will have much more impact on the finished product than will tool selection.

This concluding article of the series examines how the repository content can be used as part of a unified content strategy aimed at creating measurable return on the system investment.

Implementing a unified content strategy

Figure 1 on page 2 represents the four basic component areas of a content reuse system (CRS). The specific applications illustrated could be included in any CRS that resulted from a unified content strategy.

Let's examine the four elements:

- Content System — This is the repository. The repository is comprised of the database engine and may also include a version control system. In Figure 1 on page 2, the database component is

Continued on next page

XML traces its roots back over three decades, and in that time content reuse has become a stable and well-understood concept. In this last of three articles about XML and content reuse systems, learn about the elements of these systems, consider the two implementation strategies available, review three different scenarios, and take a look at the return on investment (ROI) picture. Become a driving force for intelligent content reuse!

A publication of

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THE eLEARNING DEVELOPERS' JOURNAL

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The eLearning Developers' Journal is published weekly by ***The eLearning Guild***, 525 College Avenue, Suite 215, Santa Rosa, CA 95404. Phone: 707.566.8990. ***The eLearning Guild*** is an operating unit of Focuszone Media, Inc., 1030 Beatrice Street, Eagan, MN 55121.

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As in any profession, there are many different perspectives about the best strategies, techniques and tools one can employ to accomplish a specific objective. This **Journal** will share these different perspectives and does not position any one as "the right way," but rather we position each article as "one of the right ways" for accomplishing a goal. We assume that readers will evaluate the merits of each article and use the ideas they contain in a manner appropriate for their specific situation. We encourage discussion and debate about articles and provide an Online Discussion board for each article.

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shown as Oracle 11i, which is only one of many possible choices. The most important consideration in choosing the database application is to ensure that it will have the capacity and throughput to handle your anticipated use. ClearCase and Perforce are both examples of version control systems.

- Parser, or Query Engine — This is the set of methods that enables users to get content back out of the repository and to use it efficiently. In the diagram, Stored Procedures, XSLT, Perl, and Python are all examples of different means of serving complex queries to users.
- Authoring Content Management — This represents the user applications you have identified for authoring new content. The examples listed in the diagram are FrameMaker, Epic Editor, Dreamweaver and Word.
- Delivery Outputs — Your delivery outputs encompass the output formats (paper or online) as well as the means provided to students for accessing the current instances. Examples of delivery applications include Adobe Document Server, Adobe FrameMaker Server, or a LMS.

Each piece of this larger system is associated with specific benefits and costs. Although each element must be evaluated on its own merits, as well as in the context of its performance within the content reuse system, system considerations can easily outweigh the benefits of any individual application choice. If the favored application, for example, does not play well with others then it will be of little use in the system. As discussed in the second article in this series, Microsoft Word is a good example of an application whose system behavior makes it a difficult choice. It is precisely because so many organizations are adopting content reuse strategies that Microsoft has intensified its efforts to make Word (and other Microsoft applications) XML friendly. The future will certainly bring successive versions of Word that integrate better into a unified content strategy.

There are basically two ways of achieving a content reuse system: build your own from available components, or buy one that does most of what you want and then customize it. If your organization has many specialized requirements and diverse processes, along with considerable expertise and experience develop-

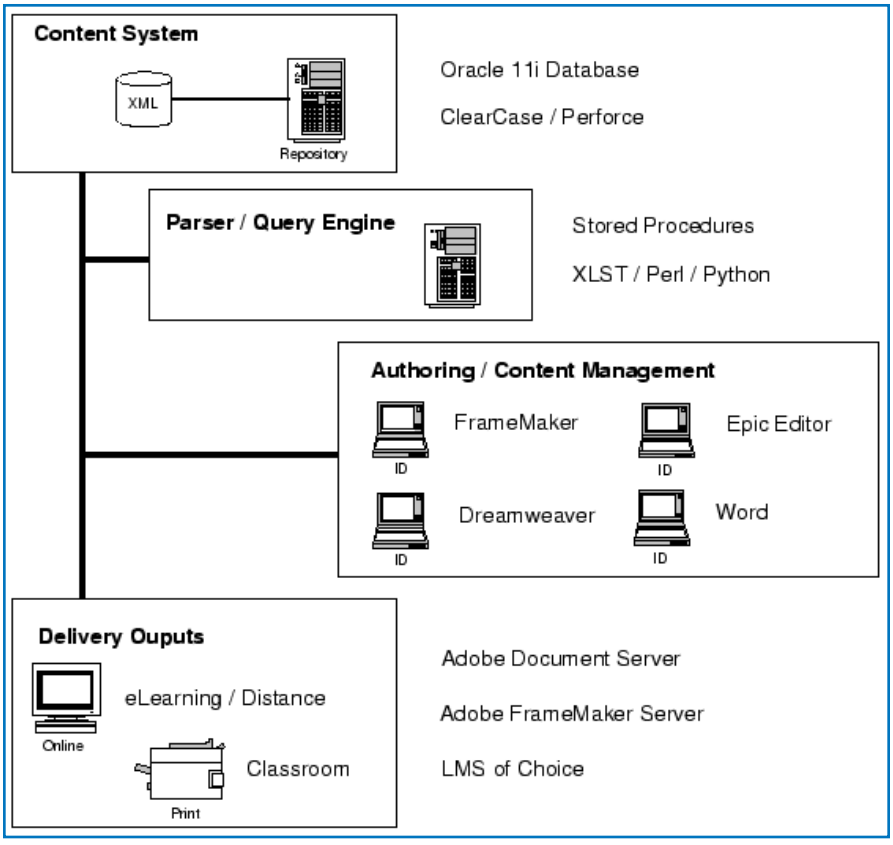

FIGURE 1 *The XML Content Reuse System has four elements.*

ing, implementing, and maintaining software solutions, you will probably not save any money by customizing a proprietary solution. If, on the other hand, your organization has much more general requirements for training, fewer audiences and simpler outputs, purchasing an off-the-shelf system may be a better solution. A vendor-supplied solution may also be in your future if your organization lacks in-house technical expertise and you normally contract out such projects.

Build your own

In order to devise your own content reuse system, you need to have some specific areas of expertise available:

- Database Architect (DBA) — The DBA creates a data library that exactly matches your document type definition (DTD). The library consists of data tables that are optimized to perform well with the most common search routines. The architect should be experienced with hardware and with the network configurations appropriate to your organization's needs.
- Database Interface Designer (DID) — The DID is going to organize your query engine and make sure that all the routines necessary to input and output data to your authoring and delivery environments operate properly.
- Configuration Engineer (CE) — The CE configures and maintains the version control repository. This person should be an expert in the software you have selected (ClearCase, Perforce, etc.). Many DBA's think they can do this job, but very few can. Configuration engineering is very important to making the whole system reliable and expandable.
- Template Designer — You will need one of these for FrameMaker and another one for Dreamweaver, if you use these products. Many organizations contract this task. Contracting is an acceptable alternative, as many excellent consultants exist in this field.
- LMS or Server Engineer — This is an expertise that is generally provided (for a fee) by the software vendor that supplies the LMS or server platform. As noted before, Adobe has a wide range of supporting and training services for their enterprise server products.

You'll only get the full value of your analysis and planning if you apply the results of that research by developing your own solution. Any other approach compromises your results. You'll also build a core competency in developing and delivering learning objects.

The principle requirement for success when developing your own solution is buy-in from top management. There must be commitment and a requirement to achieve a workable system in a modest time frame for a realizable cost. Successful completion of a system in-house results in the biggest gains in productivity and largest reduction in cost per training hour. Any organization that has a sincere commitment to providing quality training programs, especially one that aims to increase the percentage of e-Learning in its training offerings and that has more than 10 training content designers,

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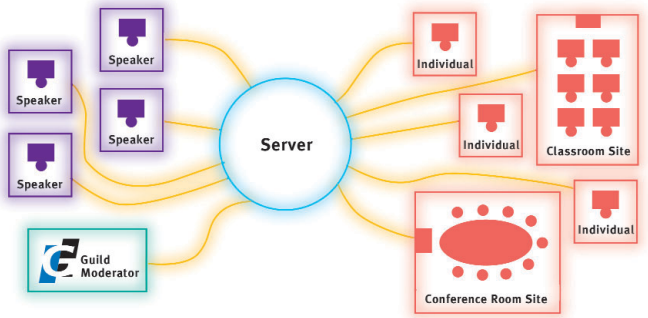

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should consider creating its own system.

Some of the main advantages and risks of developing your own content reuse system are shown in Table 1, below.

Buy existing system

The principal advantage to purchasing a system off-the-shelf is that someone else claims that it will work for you, and they guarantee that they will support your implementation of their software. As with any vendor, you are negotiating a relationship of mutual benefit. Always spend more time researching the company and their references than you spend listening to the sales pitch.

Things to avoid when shopping for a system:

- Being the first customer, or being that vendor's first "big" customer.
- Buying a solution you do not understand — or one that the vendor is unwilling or unable to explain so that you can understand it.
- Becoming a client of a company whose primary goal in software design is to lock you into their proprietary framework. This can be very dangerous, especially if the company disappears in five years.
- Purchasing a product that does not do some of the main things you require it to do, on promises that the company will customize it to do exactly what you want. At this point you might as well make it yourself.

TABLE 1 *Advantages and risks of developing your own content reuse system*

Advantage	Risk
What you design is what you get. It is not necessary to wage an endless battle with a vendor over features or functionality.	You are not purchasing a proven solution. Although the technology is sound, your implementation may fail.
The system that results will be more extensible and flexible. As the needs of your organization grow and change, your system will accommodate these changes better.	Unless you exercise restraint, your system may outgrow your needs and become a monster that consumes more resources than it returns.
Your system is entirely within your control. Because you own the entire source, you are not at the mercy of a third party.	Your organization needs to be able to provide the development infrastructure to produce a satisfactory system, and then maintain it enterprise-wide for many years.
Once the system is in place and in use, it is less expensive to maintain (unless you change it).	You can budget expenses better with an outside contract than with an internal development project.
You build a great deal of specialized competency in your designers and production staff.	Replacing that expertise can be very difficult to do.
Designers and developers work together, keeping one another current in skills and development within the XML world.	Designers and developers spend a lot of time integrating new software version updates, and other less-productive tasks.
Because your system is driven entirely by your own needs, you don't need to put up with evolutionary changes created for someone else's benefit, but you must train your people to use it.	When resources are scarce, you may find your development efforts are cut back precisely when you need more support.

Some of the main advantages and risks of buying an off-the-shelf content reuse system are summarized in Table 2 on page 5.

The deciding factor in whether to buy a vendor product, as opposed to creating a custom solution from other components, is resources. Getting any new system implemented is going to require resources. If the resources are not going to be available within your own organization, then you will need to purchase those hours from external vendors. Creating your own custom solution is going to require many more hours of development than implementing a vendor solution. If your training department is small, or your organization does not have the budget to spend on developing future capabilities at the expense of deliverable training hours today, then you may have insufficient resources to properly design and implement your own system.

No system that has insufficient development resources allocated to it can compete with an off-the-shelf product. In developing that solution, the vendor can amortize development costs across many different clients. Continuing development and maintenance costs are similarly shared. Many organizations have a cultural bias toward purchasing turn-key solutions, even if they do not perform as well as custom applications. Regardless of the technical benefits bestowed by one kind of system or another, it is often better to pick the right solution that matches the business realities of the enterprise.

Implementation scenarios

The following scenarios represent three different approaches to implementing a unified content management strategy. Though each is based upon a concrete case history, some details have been specifically altered to avoid the identification of the businesses or their employees.

Scenario A — aerospace

Business A is an aerospace company with a very large and capable IT organization. It has a history of developing very complex, highly customized solutions that meet exacting business and regulatory requirements.

When Business A went out into the content management marketplace, they

did extensive research of many different vendors with competing products. They had a tendency to "study a product to death." The IT and engineering organizations generated thousands of pages of conflicting and contradictory requirements, which no vendor was able to meet.

Business A purchased an off-the-shelf product, which the vendor promised to customize to fit the needs of the enterprise. The IT organization fought the project tooth and nail from start to release. When eventually implemented, the system was largely ignored by many of the divisions of the organization, despite having been specifically tailored to meet their needs. The Director of Information Services and Communication then used this software as a club to bring each of the disparate organizations into line — to streamline their procedures and to regularize their methods for producing documentation and training for each of their markets on five continents.

Though training productivity suffered initially, after all was said and done, the system achieved a 40% increase in training hours per designer. The resulting training was consistent, won numerous industry awards, and was instrumental in creating a truly global training organization.

Scenario B — manufacturing

Business B is a large manufacturer of consumer products, with a relatively small and under-appreciated IT organization. It regularly purchases software solutions and maintenance contracts that provide for the special needs of specific user communities within the organization.

When Business B went out into the content management marketplace, their aim was to find a state-of-the-art product that they could purchase to perform a limited set of very specific tasks. They concentrated on vendors having associations with their existing vendors and very quickly narrowed the choice down to two competing products.

Business B hired a team of three consultants to work with every division to develop a customized solution from open source components. In the process of analyzing the communication and training needs across the different divisions, the team discovered large pockets of inefficiency and waste. During the three-year development cycle, the development program cost the organization approximately $17 million.

In the ensuing five years, the resulting system consistently produced higher quality training deliverables throughout the enterprise and contributed significantly to lowering the training costs for new employees by 38%, resulting in an average cost savings of $12 million per annum. By selecting this solution path the company identified training as one of their core competencies.

Scenario C — retail

Business C is a major force in retail, with both corporate and franchise operations world-wide. Their stated aim in adopting content reuse stemmed from dissatisfaction with the results of their training programs. They felt that they could achieve better, more consistent training outcomes by creating better and more consistent training content.

Business C quickly selected a content management package from one of their existing vendors and implemented it on a trial basis in a single division whose training outcomes were dead average for the organization as a whole. Although the system did result in economies in the production of training content consistent with the vendor's promises, the training outcomes did not improve.

The trial implementation was written off to experience and a new vendor with a different content management offering was selected. The results of this trial in a different but equivalent division produced approximately the same economies and the same mediocre training outcomes.

Leaping to the correct conclusion that garbage in results in garbage out, Business C conducted another trial of the second system within the organization that had the best track record for producing positive training outcomes. To their great surprise, the training resulting from this trial was as indifferent to the technology as the others had been.

An expensive consulting firm was brought in to study these three trials and to find the silver lining in having apparently wasted several million dollars. Six months later, the consultants returned their verdict: Business C was attempting to solve the wrong problem with the right solution. The consultants recommended that the organization implement the second vendor's solution across the entire enterprise. This would produce economies in production of training, but more importantly it would save tremendously in localization costs for training materials.

TABLE 2 *Advantages and risks of buying an off-the-shelf content reuse system*

Advantage	Risk
You are buying a proven product: it worked somewhere else.	If it doesn't work for you, what's wrong with you?
Your business processes are constrained to follow a proven model.	Your processes are constrained whether or not that makes any sense for your organization.
Without spending a large amount of your own capital, you benefit from receiving regular software updates.	The updates may wander further and further from your core needs, requiring more and more expensive customization.
You can budget a more or less fixed cost for support and custom services.	That budget may be inadequate to meet your organization's needs. The vendor may have no additional resources to meet extraordinary needs.
You are investing in a limited system, providing benefit against cost. This is unlike a home-grown system, which must be continually justified.	You cannot, with just a little more expense, or effort, reap any more result from the system.

The consultants concluded that the poor outcomes from training indicated that training was being used inappropriately as the cure for problems that did not arise from a lack of good training. By reducing their focus on training as a cure for all ills, the company was able to concentrate on better internal communication. The same content management system that was adopted for training was the perfect solution for most of the new communication initiatives.

Return on investment

If we don't change direction soon, we'll end up where we're going. — *Professor Irwin Corey*.

In today's competitive training market, it is increasingly important to provide management with measures of performance that can be used to quantify the return on investment in training. Traditional resistance on the part of instructional design practitioners toward providing these measures has resulted in lower funding levels and a reduction in the importance once accorded to training programs. This result is diametrically opposed to the stated aims of the training development organization: to achieve the greatest performance improvement. Therefore, if the aims of the training development organization are to be realized, the demonstration of measurable return on investment for training is just as important as creation of processes whereby performance can be improved.

ROI basics

Return on Investment (ROI) is a percentage calculated as the ratio of net program or project benefits to program or project costs times 100. In order to determine this ratio, three questions must be answered:

- What is the reason for training?
- What is the investment in training?
- How is the return measured?

Assessing the benefits

What are the benefits associated with training? Generally, training is supposed to provide people with the capacity to perform a particular function. Theoretically, the better the training is, the better the function is performed. Performing a function better is usually measured by the time required to successfully execute tasks, the number of mistakes made per thousand operations performed, and the ability of the student to extend these skills into new and more complex operations.

When implementing a costly new Unified Content Strategy (UCS), it is important to understand the perceived benefits of the existing training development organization. Careful thought must be given to the effect the UCS will have on achieving those benefits. When this is understood, any additional benefits can be added to the equation — but it is important to note that the legacy benefits are a given, while any benefits from innovation must be carefully examined and justified.

Collection of metrics and the evaluation of that data is an important function of Performance Engineering. Measuring time-sensitive tasks before, during, and after training provides a simple measure of performance. Unfortunately, like almost any simple measure of performance, it isn't worth much out of context. Without an understanding of the context,

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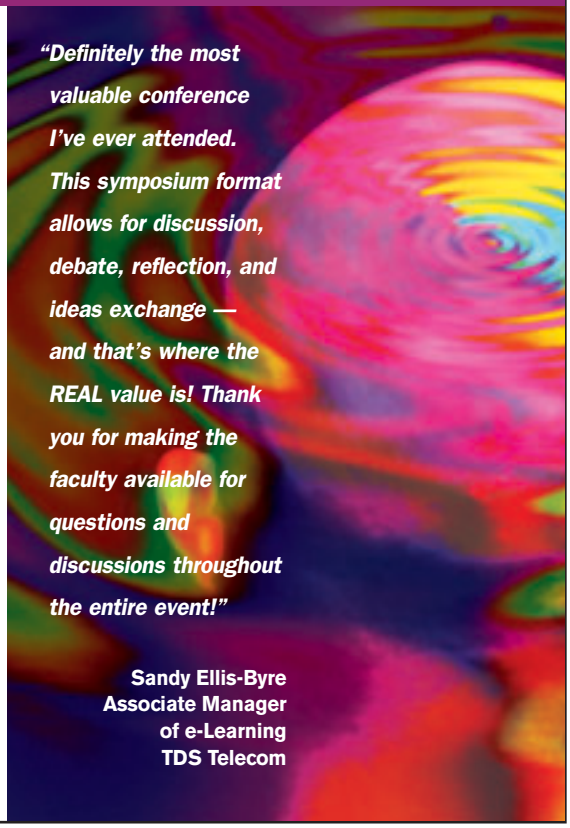

it is impossible to attribute any change to training. One important reason why many training development people neglect this kind of in-depth analysis of results in context is that they know well how to do what they are doing, and don't want to know if they will be required to do something different. Performance problems are almost never solved by training alone, just as they are almost never solved without training.

The adoption of a UCS that incorporates an XML repository does not directly impact the quality or effectiveness of training. It is an investment in indirect benefits. Given the same resources, UCS allows either a) the production of more units of training (hours, modules, etc.) per development hour OR b) the production of higher quality training for the same development hours.

If an organization needs to provide more training at the current or better standard, then the challenge is to describe how the UCS will create efficiencies within the development cycle that produce a higher volume of deliverables per unit time. An example of this kind of need would be a training department supporting a sales organization. Things change so fast in sales that the training is never able to keep up. Implementing the right UCS can provide many different just-in-time training options. This is not an option without a UCS.

If an organization needs to deliver higher quality training, the UCS can allow training designers to spend more time conducting the front-end analysis and evaluating curriculum while spending less time in the production and publication of the results. A medical equipment manufacturer's training department might provide an example of this kind of need. In this setting, accuracy and effectiveness of the training is as important as hardware quality assurance. The right UCS can provide an accurate and reliable information path for training, as well as the ability to leverage successful training methods more quickly into different training.

Putting it all together

The hallmark of the best training programs is that they provide a foundation for additional skills that were outside of the scope of the original training. All training ought to be designed to make the

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- **A draft of the first paragraph**, written to grab the reader's attention and identify the problem or issue that will be addressed.
- **A short outline of your main points** addressing the problem or resolving the issue. This could be another paragraph or it could be a bulleted list.
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acquisition of more knowledge likely from the knowledge the student already has. There is a depressing amount of training with blinders on out in the real world — training developed so exclusively within its own defined competencies that it offers nothing to any companion curriculum. In measuring the effectiveness of training, it is important to measure these secondary impacts that lower the cost of subsequent training.

ROI by the numbers

When looking at ROI and cost benefit analysis, it is important to remember that:

- Improving efficiency means achieving the same results with lower costs.
- Improving effectiveness means achieving better results with the same costs.
- It is possible to get better results with lower costs, and this is called improved productivity.

The following scenarios are examples of different ways to look at the ROI of training and at how the investment required in a UCS and an XML repository can be justified.

Scenario of a small training organization:

In this company no one has put a dollar figure on the value of training to the company. Some training is sold to customers, but most of it is internal. There are no statistics on the performance of employees before and after training, nor is there any budget to collect them. The training manager discusses this with the other department managers and between them they arrive at a figure of 20% as the increase in productivity produced by training. Without metrics, a consensus process is the only means available to establish this figure.

The employees receiving training produce $1 million of net revenue to the company. Therefore, training has produced a net benefit of $200,000 to the company. The cost of the training is $150,000 per annum, so the net return on investment is:

ROI= $200,000-$150,000 = $50,000

Or

($50,000/$150,000) X 100 = 33%

Assuming that the cost of implementing the UCS is also $50,000, the task of the training manager is to show where $50,000 of benefit (or more) will result from the new system. It is also important to note that this kind of content repository works best as an enterprise implemenation: a repository used by anyone who has need of accurate and consistent content, not just training.

Figure 2 (left) shows the annual savings, based on the number of employees. "Employees" here means those individuals who are using the content repository. This may include instructional de-signers, technical writers, marketing writers, programmers writing software specifications, and so forth. The following assumptions were made:

- Burdened rate = $100/hr.
- Hours per year = 2000
- Percent of time spent creating content = 75
- Percent of content reuse = 50

Scenario of a larger training organization:

According to Microsoft, if you have 100 employees using a system that cost you $1,120,000 initially and requires a staff of four IT professionals to run, the system must return an increase in productivity of 16% to break even the first year. Whether you spent this money on developing your own system or purchasing someone else's system, it is money well spent.

Increasing the productivity of instructional designers depends on a number of factors:

- How much of the designer's time is spent actually developing content, as opposed to time spent developing curricula?
- How much of your content would actually get reused? In some organizations, the quantity might be almost nil and in others it could approach 50% or even more.
- How many repetitive training operations do your designers perform in order to get content to the students?

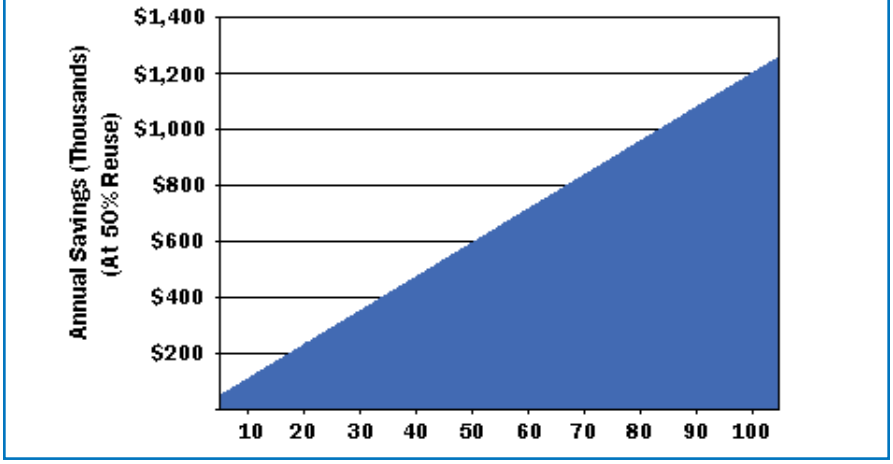

FIGURE 2 *Annual savings by number of employees*

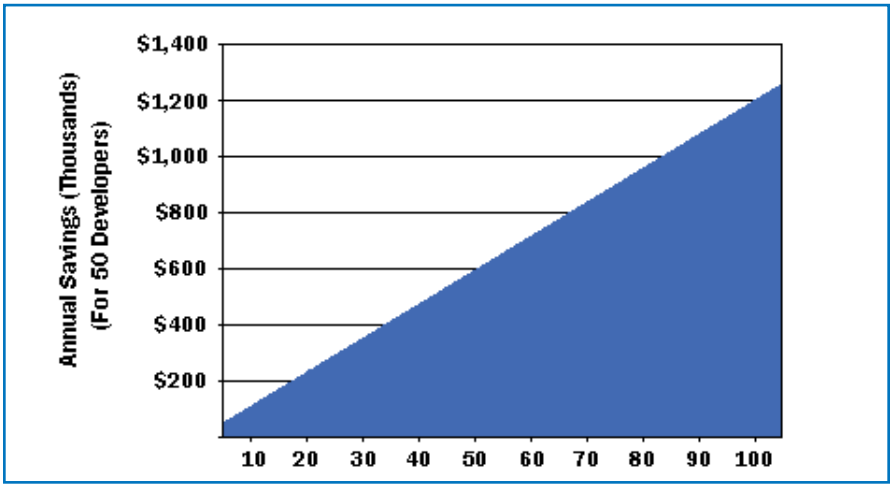

FIGURE 3 *Annual savings by percentage of reuse*

- Do your designers have the willingness and ability to change their methods?
- Does your organization possess the infrastructure and the commitment to design or customize, implement and use the content reuse system?

Assume that the instructional designers in your organization spend approximately 60% of their time accomplishing some aspect of content development. Further assume that of this time, roughly two-thirds would be generally unaffected by content reuse. If the content reuse system you implement results in that employee group becoming 15% more productive in just that third of their tasks, then the net result is a 3% increase in productivity overall:

(1/3) X .6 X .15 = 3%

Using the above example from Microsoft, this organization could invest as much as $210,000 in the content reuse system and break even in the first year:

(0.03/0.16) X $1,120,000 = $210,000

As mentioned above, it is also important to note that this kind of content repository works best as an enterprise implementation. For larger organizations, training can take the lead with this new technology and prove its benefits and efficiencies to the rest of the enterprise. It should always be the intent to have one shared repository, or at most a very few repositories used by different organizations within the enterprise.

Figure 3 on page 8 shows the annual savings by the percentage of reuse of content for training. The following assumptions were made:

- Burdened rate = $100/hr.
- Hours per year = 2000
- Number of employees = 50
- Percent of time spent creating content = 75

"Employees" here is used in the same sense as previously noted: all individuals who are using the content repository.

For every organization, there is some training that is mandatory, some that is essential, some that is preferred, and some that is optional. Mandatory training represents those training hours that must be delivered to meet statutory or contractual obligations. Essential training provides to the employees the skills and knowledge they need to perform their jobs to a minimum standard. Optional training provides the employees with the skills and knowledge to excel. In today's tough economic conditions, many organizations have been trimming their training efforts to such an extent that they are beginning to see negative productivity results. Dolly Konzelmann, President, International Customer Service Association, illustrated this point in a speech in November, 2003, by referring to "...the cycle of what I call BSNT (Business Sucks, No Training). The series of steps goes as follows: bad economy, training cutbacks, service levels declining, customer dissatisfaction increasing, resulting in loss of business. At the end of this cycle, the need for training is triggered."

Faced with such realities, these organizations are faced with the challenge of providing a competitive, sustainable solution to obtaining quality training that facilitates excellence. An XML-based content-reuse system qualifies as an excellent example of such a solution.

Competing with consultants

Outsourcing is all the rage today. In a world run by bookkeepers, the outsourcing firm has many advantages over the internal training organization. In the first place, the outsourcing firm will have a great deal of experience working with a variety of different training programs. They can amortize the costs of providing high-technology solutions across many different clients, so that their unit cost to any one customer for any one project is much smaller than for an internal department. They will also have developed a broad range of metrics and evaluation strategies and will be able to provide impressive statistics to prove that their economies are not paid for by any collateral damage to the company.

In order to compete with this kind of marketing machine, the internal training department must diversify both in terms of offerings and in terms of processes. If the internal training department already provides the flexibility and economy that the outsourcing firm promises, there is less incentive for the business to switch from a proven performer to a promised one. If the internal training department diversifies to provide full performance improvement services to the business, then the training deliverables portion is only a small segment of their value to the organization. The other performance enhancements they provide, such as analysis, are intrinsically internal core competencies of an organization. Having a flexible and powerful XML content management system allows the performance improvement organization to offer a wide variety of blended solutions to different performance problems. This kind of responsiveness and flexibility offered to the business is much harder for the outsourcing firm to provide, or even promise.

Conclusion

Even if you're on the right track, you'll get run over if you just sit there. — *Will Rogers*.

Implementing a robust content reuse management system for the enterprise is not just an idea whose time has come, but an idea long overdue. Far too often, training departments must make hard decisions in hard times that end up being false economies. The underlying technology of XML has been proven in numerous settings over the past 20 years, first in government and then in the private sector. It is rapidly getting to be the case that if your enterprise does not implement such a system, you will compete at a considerable disadvantage in your marketplace.

In summary, the advantages conferred by the XML content repository and reuse system are:

- Economy — Provides the same economies of scale as automating any labor intensive, customized process.
- Communication — Provides a naturally unifying influence on the organizational communication, both internal and customer-facing.
- Quality — Provides the ability to attain higher quality levels and increased consistency across all training and similarly-sourced deliverables.
- Productivity — Provides additional capacity to produce mandatory training at a lower cost. Produces surplus capacity that can be used to develop more effective training that raises enterprise-wide productivity.

Once those advantages have been delivered, they facilitate the effectiveness of the unified content strategy. The unified content strategy affects the effi-

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ciency and productivity not only for training, but also for all corporate communications. This is the future of communication within the enterprise — training professionals and performance technologists can either be a driving force within these changes or they can just go along for the ride.

Bibliography

Microsoft. "Content Management Server, Return On Investment Calculator". http://www.microsoft.com/cmserver/evaluation/roicalculator.xls , 2003.

Phillips, Jack. *Return on Investment in Training and Performance Improvement Programs*. Butterworth-Heinemann, ISBN 0-750676-0190, 2003.

Szelwach, Celia. "ROI for Training — It's Not Rocket Science". http://www.creative-collaborations.com/articles/ROIforTrainingASTD7-03.pdf , ASTD, 2003.

AUTHOR CONTACT

Henry Meyerding is an instructional designer, with experience in the telecommunications and software industries. Trained in Engineering, Henry's career gradually changed from doing engineering to explaining to others what engineering had accomplished. More than fifteen years in the field of technical documentation provided many lessons in information systems, most of them relevant to learning design. The focus of Henry's career came to center on instructional design largely through participation in rework of documentation masquerading as training, so that it turned into actual training. He found that he enjoyed working with students to overcome obstacles to learning and as a result Henry has concentrated on developing blended learning solutions. He lives in Sultan, WA with his wife and four children. After being outsourced for the second time to the same outsourcing firm, he is currently seeking other opportunities and working on a book project to explain practical instructional design theory and method to technical documentators. Contact Henry by email: hwm@goomba.com

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