

Rapid Object-Based Development

Greetings!

Everybody wants it yesterday!



There is an old saw in the training business that goes something like “We can deliver the program good, fast, or cheap...pick any two.”

Unfortunately, as a professional, fast and cheap (but not good) isn’t really a viable option. For one thing, customers tend to be unhappy with deliverables that do not clear the “good” hurdle. You could define acceptance criteria in advance and agree that “effective” is acceptable even if you forgo “polished.” But still, you want to deliver work that is “good.”

In today’s economy though, cost pressure is always there—cheap is relative but if you cannot deliver cost-effectively, you will lose business.

And who wants to compromise on fast? Business moves

quickly. One reason that companies hire outside consultants is that their internal staff is too busy at the moment to handle something that needs to be done now. Or, maybe they want a specialist because the specialist has tools and resources that will help them get the job done more quickly.

It sounds like a “no-win” scenario but it isn’t. Like anything, you have to make trade-offs to meet the important business requirements. Many projects that look like “one-off’s” or “stop-gap” solutions today end up with a much longer shelf life. It is important to be smart about investments of time and effort (internal training resources, SMEs, and external consultants) to get the greatest value for the corporation over time.

One key to having it good, fast, *and* cost-effective in the long-term is “re-use.” Re-use is available at several levels if you have the organizational know-

how and discipline to take advantage of it. Standard templates for faster development. Tagging for rapid searching. “Chunking” of content to make it more likely that it can be shared by multiple audiences. Content inventory organization schemes to allow long-term storage of components.

We’ve been “forcing” re-use into both our design and development over a number of years and projects. It does not require a high-tech solution, though that can help. What it really takes an understanding of how performance and capability work and the will to make it happen.

We can help with that. Please call if you would like to talk over some ideas.

Pete

Peter R. Hybert, CPT
Principal Consultant

Rapid Object-Based Development

We have been doing “rapid object-based development” in various forms for years, over twenty in fact. We haven’t always called it that. But that is a pretty good description of it.

At the macro-level, we use a standard ISD process for training development. It is a well-documented model and is actually very similar to new product development models. It’s valid.

But, those that view the process as more iterative have a point too. If you waited to complete the detailed analysis before

you started any design or development, you would still be waiting—creating the actual materials helps you find the questions that need to be answered.

It is also getting increasingly difficult to get master performer time. Anything you can do to “divide and conquer” can speed up the process and eliminate potential bottlenecks. (It is the equivalent of smaller batches in a lean manufacturing environment.)

Basically, what we do, once we’ve analyzed the overall per-

Inside this issue:

Rapid Object Based Development	2
Top 5 Tips for Content Management	3
Project Profile: Selling Energy and Environmental Solutions	3
News and Events	4
Rant: The Pechu Kucha	4

Rapid Object-Based Development, continued

formance and defined the larger deliverable chunks (e.g., “modules,” “units,” etc.) is define specific objects to address individual capabilities. This makes the “unit of development” smaller to allow

- **Faster development** because you can schedule objects to work on depending on availability of master performers or starting content
- **“Divide and conquer”** by assigning groups of related objects to individual developers, which helps them be more efficient
- **Easier re-use downstream** because you can find and re-use a logical “chunk” of content. Individual graphics, slides, or pages are actually too small in most cases for someone (other

than the original developer) to find.

“thinking this way shifts the focus from content, i.e., what do we “tell ‘em,” to capability, i.e., what do they need to be able to do, putting the focus on the learner”

Capability is Linked to Objects

One key to defining useful objects is understanding chunks of capability. We break capabilities into “performance” capabilities and

“supporting” capabilities.

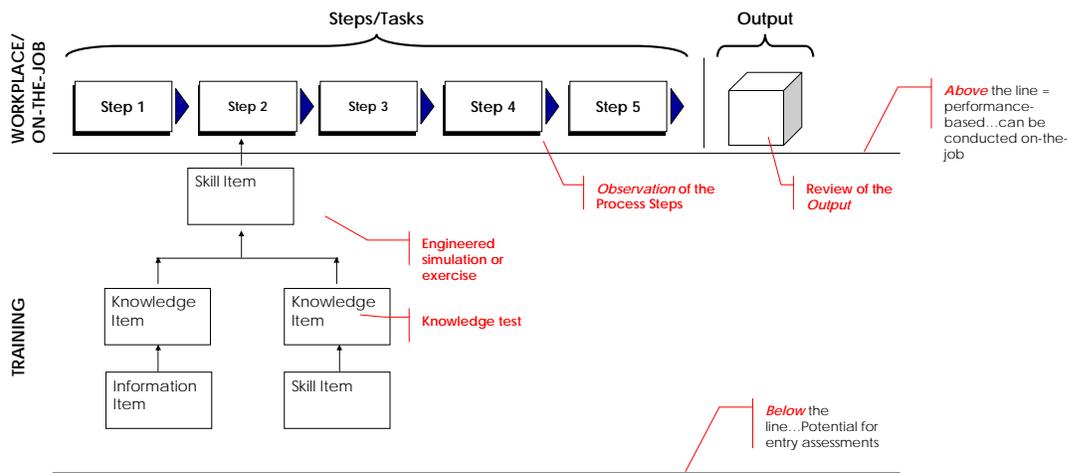
Performance capabilities are things people need to **do** on the job. They are usually tasks or groups of tasks.

Supporting capabilities are underlying components or ingredients that enable performance. For example, concepts, skills, rules, etc.

Usually, supporting capabilities enable more than one performance capability. To sell something (a performance

capability), a salesperson needs to know what the products are and what they can do. This same supporting knowledge is needed by engineers who install the product.

The diagram below uses a traditional learning hierarchy format to show the relationship between performance capabilities (needed on the job) and supporting capabilities. Note that some capabilities would be identified as pre-requisite.



In addition, the red text in the diagram shows how you might verify performer capability at each level. Of course, you don’t always need to verify at every level...

Use of Object Shells (Instructional Templates)

There are only so many types of capabilities. To teach them, rather than create everything from scratch, you can define semi-standard instructional “sub-routines” and “save/modify.”

For example, to teach a rule, you may want to

- 1) Define it.
- 2) Describe an example of how it is applied.
- 3) Give learners an exercise applying it to a representative situation.

Depending on the complexity of the performance you may need more examples, non-examples, or practice. In some cases, it may be simple enough that you decide you don’t

even need the practice. Now, much of the object design and development can be a matter of picking the appropriate template, putting in the analysis data, and then filling in the detail during development.

FAQ: Doesn’t this limit developers’ creativity?

The short answer is “no.” But we assume that the developers’ goal is to get the capability “installed” in the learner as quickly and effectively as possible. Think-

ing this way shifts the focus from content, i.e., what do we “tell ‘em,” to capability, i.e., what do they need to be able to **do**, putting the focus on the learner.

FAQ: Doesn’t this create too much complexity?

It does create work for project management during development and content management later on. We put tags in the materials and update the design at the end of development for use as a basic capability-based content management tool. Going forward, you know what each object can **do** (vs. just topics).

We have been using this approach in a concentrated way for one of our clients and it has enabled us to increase throughput significantly. A related benefit is that we can more easily include (and keep) application exercises, which can be difficult to sell to business people who want to reduce training cycle time.

It wasn’t intentional, but we noticed that the object method is in part an application of lean principles to training development. The result is faster, better...and cheaper.

Can you connect processes to roles to capability requirements? Would it be a good way to align your HR systems?

Give us a call...we have some ideas.



Content management was a big issue for awhile...though the excitement may have died down, it is still an underused means of improving training and information consistency,

cost, and life cycle management. There are a lot of ways to do it wrong though. Here is our top five list.

🚩 *Relying Exclusively on Technology.*

We love computers and especially the promise of eliminating all thinking and effort. Too bad...content management doesn't work that way. Before you can manage content, you have to understand the *key relationships* between the chunks of content. There are no shortcuts.

🚩 *Fear of Complexity*—See the previous point. Once you start looking at the problem, it can appear too complex to deal with and people give up. The complexity can be managed though, by using a model that focuses on the “vital few” characteristics and uses techniques (e.g., visualization) to reduce rules and data.

🚩 *No Standards or Structure (“Wiki-Style”)*—We love Wiki-pedia...who doesn't? But even Wiki's benefit from upfront organization and structure. In the case of content management, you need an inventory scheme. Sure, the structure needs to be “evolvable” over time but without it, you will only be able to find the content you personally stored. And that is no better than just a simple keyword search.

🚩 *Using a framework not based on content.* Some of the systems we have seen are organized by the media (or type of file). Others, by audience. Those are easy characteristics to define and, at least file type, can be read automatically by the computer. But, to find things based on content, you need categories and descriptors related to what the content is, not how it is packaged.

🚩 *No Top Down Requirements*—You can do almost anything with a computer these days. So the key is defining what you want to do and why before you get started. Otherwise, you might not ever get there...if you can even figure out where “there” is supposed to be.

Project Profile: Selling Energy and Environmental Solutions

Recently, we completed a training development project for sales and technical resources on the sales process, tools, and technology for selling large-scale infrastructure construction projects based on savings generated by resulting reductions in operating costs (primarily, energy).

The project was originally intended as an update to an existing program but, as usually happens, that didn't fit the need. Instead, we created a new program structured in four sections to follow the sales process. For example, teach prospecting, then let participants go prospect. Then, they come back six weeks later for the next segment, say “proposing.” Etc.

The intent was to incorporate real work as much as possible into course exercises and examples. The on-the-job application was direct and immediate after learning. And the business intent was to prod the sales efforts along, hopefully, resulting in more sales. Since these projects have a long sales cycle (often multiple years) we don't yet know to what degree the business strategy worked.

We used the capability and object-based model described in our lead story to manage development and enable downstream sharing and re-use of content.

Lessons Learned

Below is a summary of what we consider the key success factors.

Don't Assume “Everybody Knows”

As with most training development projects, one of the key outcomes was clarification of previously intuitively understood content. That is, process, concepts, tools, practices, resources, etc. that “everyone knows” but are not articulated.

In our early meetings with the SME team, we created a quick process model (just so “us consultants” could follow their discussion!) but ended up turning that model into a key organizer for the content. It provided a recommended “standard” and the “you are here” picture. Ultimately, it was adopted by the business.

Other examples included some basic questions. Which tools to use for which types of analysis? How much information is needed to initially qualify a sales prospect? These were questions people solved

on the job but for which the business had not yet set a standard or recommended practice. This is really an under-appreciated side benefit of custom training development. Sometimes clients want to wait until they have it “figured out” before starting training development. Though it can be painful, we prefer to be engaged earlier, in large part because the need to document and explain things (to develop training) drives clarification and decisions that can otherwise be deferred or missed.

Use Capability-Based “Chunks”

As described in the lead story, we used an object-based design. This was especially helpful in allowing us to grab and move chunks around in the sequence when needed..

Also, the development schedule was very aggressive—the object design allowed us to build chunks quickly by using templates and available SME time.

Use Field Master Performers

The majority of input came from a team of top-performing field practitioners. Even those who were technically subject matter experts had recently come from the field. They knew what people needed to be able to *do* to succeed...they “had passion” for the subject, but they ultimately wanted to show tips, tools, techniques, and trade secrets to get better sales results.

Conclusion

This project was a reminder of the value of collaboration. Our role was really to provide the structure, facilitate the decision-making, monitor and track the progress of deliverables, and help master performers articulate and document what they knew intuitively. Ultimately, our role was simply to convert *their* expertise to trainee capability using an instructional process that could be repeated over time.

“the need to document and explain things (to develop training) drives clarification and decisions that can otherwise be deferred or missed”

News and Events...

Vote for ISPI Director!

If you are an ISPI member, we are pleased to inform you that Pete, along with other qualified candidates Fred L.E. Stewart, Carol Lynn Judge, and John T. Fox (all CPTs) are running for director of the International Society for Performance Improvement (ISPI). We encourage you to become acquainted with everyone on the slate and to exercise your vote.

To learn more about Pete's and the other candidates' goals and vision for the Society, please check the statements on ISPI's website (www.ispi.org), or contact us directly. The health of the Society depends on your active participation.

Keeping the H in HPT

ISPI's Performance Improvement journal featured an article by Hwan Young Jang which referenced an earlier article Pete published in 2003. We are pretty sure the author misunderstood Pete's intent.

The question is whether we should focus on *human* performance or just performance. For more detail on Pete's response, check out our blog, or wait until it is published in the March 2009 issue of ISPI's Performance Improvement Journal.

Visit *"the library"* on our website for past presentation hand-outs and related articles!

Introducing A New Team Member

Recently, PRH Consulting, Inc. gained a new employee: Pete's son, Ian Hybert. Ian graduated cum laude from Augustana College with majors in philosophy and political science in 2007. At school, Ian served on the executive board of several groups he belonged to including: Carlson Residence Hall Council, (President) and Alpha Sigma Xi (Secretary and Scholarship Chair). Upon graduation, Ian was also welcomed into the selective Phi Beta Kappa Society based upon academic achievement and leadership.

Originally, Ian was interested in pursuing a career in law, but after participating in several projects for clients like Eli Lilly and Siemens Building Technologies, Ian became interested in the human performance improvement business. He



particularly enjoys working with a variety of clients, jobs, and tasks. Through the analysis process, Ian can see how and why different jobs affect the company's overall business. He appreciates the value of this holistic understanding of a client's business. As a fresh college graduate just entering the field, it affords an invaluable opportunity to learn not only more about the performance improvement business but also about business in general.

In his spare time, Ian enjoys music and film (primarily classics). Ian also enjoys playing guitar and (until recently) following the recent historic presidential election.

leveraging know-how for performance!™

That superscript is no typo—we've officially registered a trademark! We've been using this tagline since the business started in 2002 and we still like it...so we decided to make it official.

We design and develop systems and tools that improve and support performance!

 PRH Consulting Inc.

PRH Consulting Inc.
20 Danada Square West, #102
Wheaton, IL 60187
630.682.1649
www.prhconsulting.com

leveraging know-how for performance!

Rant: Pechu Kucha

In the most recent Performance Express, Joanna Dunlap wrote about Pechu Kucha, a potential solution to "death-by-Powerpoint" presentations.

This approach was invented by a team of architects as a way to show designs to clients. The basic format of a Pechu Kucha presentation is 20 images/slides, with 20 seconds allowed for each image/slide.

The method has some big-name supporters, including Daniel Pink. And there is something appealing about imposing strict limitations to force better focus and more

creativity in how a message is delivered. Who doesn't dislike droning pointless presentations? But still, something about the article was bothering me...

I think it started with the title. Why does everything have become a movement? Every idea now gets named, promoted, branded, blogged, user grouped, etc. The goal is to become the next cool thing. Now, if you use a condensed presentation format or more than just bullet outlines, you look like a Pechu Kucha poser.

Another thing, let's stop bashing Powerpoint and just bash lazy content developers. It seems obvious that text and bullets should be the last resort. But maybe not. Still, that's not Powerpoint's fault.

Finally, the idea that we should just "cut to the chase" implies that there is a lot of unnecessary material in the average presentation. Maybe there is.

We can use this approach where it fits—when we are presenting a simple concept. When we are trying to get our participants to be able to *do* something, we need more than one-way information presentation—we need interaction, application, even testing. We need more than 6 minutes, 40 seconds.

Why do we think everything worthwhile should be "boil-downable" to a nugget? Should we really assume that conference audiences are bored, disinterested, distractible, and impatient...like a movie producer listening to concept pitches. Why is anyone even sitting in a presentation they are not interested in? More to the point, is getting the *gist* of an idea really the same as *getting* the idea?

Are your resources bogged down in ongoing content changes and unable to get in front of key business needs?

Give us a call...we have some ideas.

 PRH Consulting Inc.

leveraging know-how for performance!