The Content Authoring Research Report 2005

ANALYSIS AND COMMENTARY BY JOE PULICHINO

"**C**ontent is King" goes the conventional wisdom in many corners of the e-Learning kingdom and according to our latest survey, 74% of Guild Members and Associates agree. Even for those 26% who do not, content remains central to any comprehensive approach to the practice of e-Learning design, development, and delivery. Indeed, many of the Guild's research reports, regardless of their core topic, include some consideration of content, but never before have we conducted a survey and published a report focused specifically on content authoring and management. Due to the importance of these topics to The eLearning Guild community, the Guild Research

Committee included two separate surveys in this year's research program. We present the results of the first survey in this report, *The Content Authoring Research Report 2005*. We will publish a second report, *The Content Management Research Report 2005* in November 2005.

In this first report, we find that there are broad levels of agreement in the community on a number of the key issues relating to content authoring, such as the importance of instructional design, the role of the subject matter expert (SME), and the proper use of authoring tools. We also discover that a majority of the survey respondents think that over the past three years e-Learning content quality has improved, development time has decreased, and costs have gone down.

E-Learning does seem to be getting better, faster,
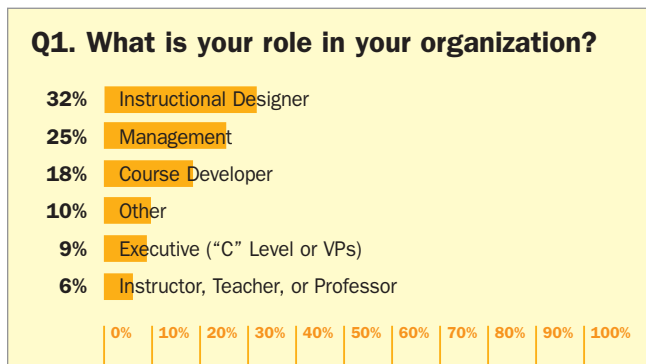
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and cheaper. Adding to this encouraging news is the fact that an impressive 84% are satisfied with the authoring tools used by their organizations — even though producing e-Learning content was not the original purpose of the tools most often used. We present these and other findings that underscore the significant and indispensable role that content plays in the work of the Guild community.

Demographics

We asked our respondents to identify themselves and their organizations by five attributes: their role in their organization, the size of their organization, the type of their organization, their organization's primary business focus, and the department they work for. This section presents the demographic data of our survey sample.

This survey, like all other Guild surveys, was open to Guild Members and Associates as well as to occasional web-site visitors. Respondents complete these surveys by accessing the survey link on the homepage of the Guild website. Naturally, Guild Members and Associates are more likely than non-members to participate, because each of the more than 19,200 Members and Associates receive an email notifying them of the survey and inviting them to participate. For this reason, we can classify this survey as a random sample because all members have an opportunity to participate, and their participation is random.

Q1. What is your role in your organization?

32%	Instructional Designer
25%	Management
18%	Course Developer
10%	Other
9%	Executive ("C" Level or VPs)
6%	Instructor, Teacher, or Professor

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Slightly more than the normal percentage of instructional designers (32%) responded to this survey. Offsetting this increase was a decline in the participation of those respondents in management roles (25%). We attribute these results to the probability that instructional designers would be more interested in the subject than managers and therefore more likely to participate in this survey.

Demographics

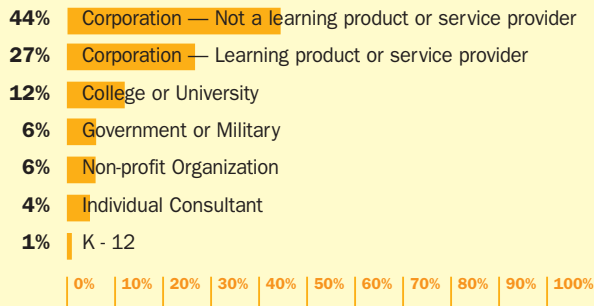## Q2. What is the size of your organization (number of employees)?

%	Category										
24%	Under 100										
11%	101 to 500										
20%	501 to 2,500										
18%	2,501 to 10,000										
13%	10,001 to 50,000										
14%	50,001 or more										

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
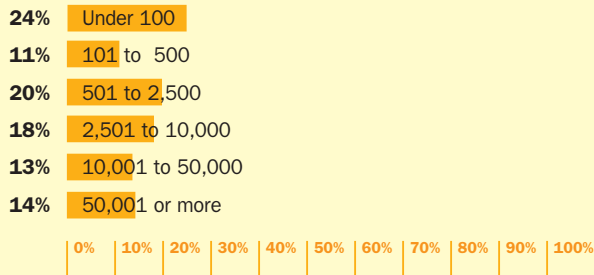
These frequencies are in line with the norm for Guild surveys. The "Under 100" segment is normally the single largest group.

Q3. What type of organization do you work for?

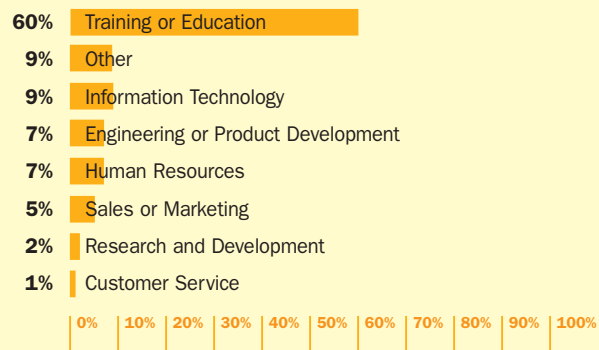| %	Category
44%	Corporation — Not a learning product or service provider
27%	Corporation — Learning product or service provider
12%	College or University
6%	Government or Military
6%	Non-profit Organization
4%	Individual Consultant
1%	K - 12

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Slightly more than the normal percentage of survey respondents who work at corporations that are learning or e-Learning product or service providers (27%) participated in this survey. We attribute this increase to the likelihood that employees of content authoring tool providers and content development outsourcers would be interested in participating in this survey.

Q4. What is your organization's primary business focus?

%	Category
16%	Financial Services
15%	Commercial Training or Education Services
11%	Technology (Hardware or Software)
10%	Other
10%	Healthcare
10%	Government or Military
6%	Professional Business Services or Consulting
5%	Manufacturing
4%	Non-profit
3%	Telecommunications
3%	Pharmaceuticals or Biosciences
2%	Transportation or Airlines
1%	Retail or Wholesale
1%	Utilities
1%	Hospitality, Travel, or Food Service
1%	Aerospace
1%	Publishing, Advertising, Media, or PR
0%	Petroleum or Natural Resources
0%	Arts and Entertainment
0%	Real Estate

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

These frequencies are in line with the norm for Guild surveys.

Q5. What department do you work for?

%	Category
60%	Training or Education
9%	Other
9%	Information Technology
7%	Engineering or Product Development
7%	Human Resources
5%	Sales or Marketing
2%	Research and Development
1%	Customer Service

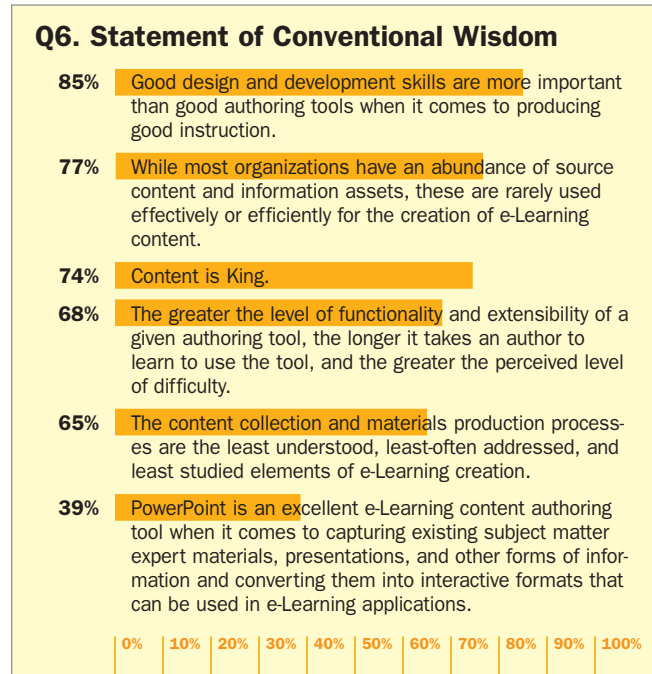0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

These results show a moderate increase in the percentage of respondents who work in a training or education department.
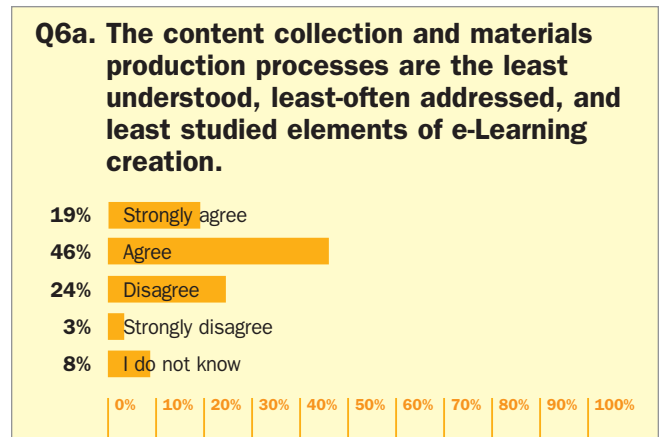
Conventional Wisdom about Content Authoring

In reviewing some of the current thinking on the subject of content authoring, the Research Committee noticed that some of the beliefs and opinions of industry experts may have risen to the level of "conventional wisdom." So we decided to test the degree to which survey respondents agreed or disagreed with six statements about content authoring in order to determine just how conventional the wisdom of these statements has become.

Chart Q6 presents a summary of the results ranked in order of the total percentage of respondents who registered agreement (Agree plus Strongly agree) with each of the six statements. Six charts which present the complete results for each statement follow this chart. We also allowed for commentary by respondents to amplify their choice, and we include a number of these comments with each chart.

Q6. Statement of Conventional Wisdom

85%	Good design and development skills are more important than good authoring tools when it comes to producing good instruction.
77%	While most organizations have an abundance of source content and information assets, these are rarely used effectively or efficiently for the creation of e-Learning content.
74%	Content is King.
68%	The greater the level of functionality and extensibility of a given authoring tool, the longer it takes an author to learn to use the tool, and the greater the perceived level of difficulty.
65%	The content collection and materials production processes are the least understood, least-often addressed, and least studied elements of e-Learning creation.
39%	PowerPoint is an excellent e-Learning content authoring tool when it comes to capturing existing subject matter expert materials, presentations, and other forms of information and converting them into interactive formats that can be used in e-Learning applications.

0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100%

As the chart indicates, a considerable majority of respondents expressed general agreement with five out of the six statements. Only the proposition that PowerPoint is an excellent e-Learning content authoring tool (with some qualification) meets with agreement by a minority of respondents.
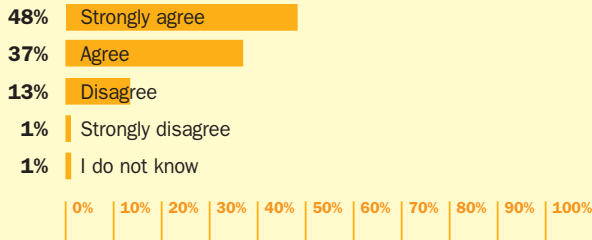
Q6a. The content collection and materials production processes are the least understood, least-often addressed, and least studied elements of e-Learning creation.

19%	Strongly agree
46%	Agree
24%	Disagree
3%	Strongly disagree
8%	I do not know

0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100%

Respondents' comments:

- "The least understood element is the need for real flexibility for teachers and instructors so they can develop courses according to their own criteria and pedagogical models."
- "I think that I would need to compare these elements with other processes related to e-Learning — what about implementation? Effectiveness? I would have preferred a list of elements to rate."
- "Yes, too much emphasis is put on the technical aspects of development. With SCORM and SCOs especially, content analysis and design is CRITICAL."
- "For many content developers, the reliance on technology has resulted in a loss of relating to the human need. We've oftentimes lost the human factor in our content development. We try too often to fit models and not to apply knowledge (only focusing on the first three levels of Bloom's taxonomy)."

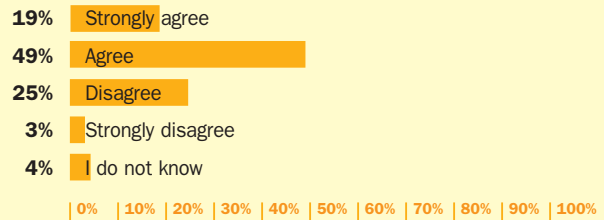## Conventional Wisdom about Content Authoring

Q6b. Good design and development skills are more important than good authoring tools when it comes to producing good instruction.

48%	Strongly agree
37%	Agree
13%	Disagree
1%	Strongly disagree
1%	I do not know

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Respondents' comments:

- "Education can only be achieved though sound instructional design processes."
- "E-Learning is only as good as the content and androgogy used in developing the learning. However, without a comprehensive, integrated, easy-to-use, time efficient, non-labor-intensive authoring tool, a chasm is created between the functions of Subject Matter Expert (SME), curriculum development, and technical authoring. Each seems to have become its own specialty. This makes it difficult for me as a curriculum developer, SME, and instructor to design andrologically effective e-Learning without becoming a technical expert. I need a good authoring tool, and it must work well with our Learning Management System (LMS)."
- "Both are equally important when it comes to PRODUCING instruction."
- "Good design and development are paramount, but I find that SMEs dumb down their ideas to make it work with tools like PowerPoint, so authoring tools are just as important."
- "Good authoring tools expedite the process and frequently require less technical 'know how' than some other methods, but without the design and development skills, no tool can keep learning from being boring!"
- "I don't believe one is more important than the other. The authoring tool should incorporate the ability to easily integrate good, solid instructional design principles. The instructional designer and graphic designers should be responsible for creating instructionally sound templates for the authors, but one needs a good authoring tool that will allow creation of these kinds of templates."
- "It takes good design skills, effectively organized content, and user-friendly tools that allow you to develop advanced functionality without a steep learning curve that contribute to the overall success of an e-Learning project."

Q6c. The greater the level of functionality and extensibility of a given authoring tool, the longer it takes an author to learn to use the tool, and the greater the perceived level of difficulty.
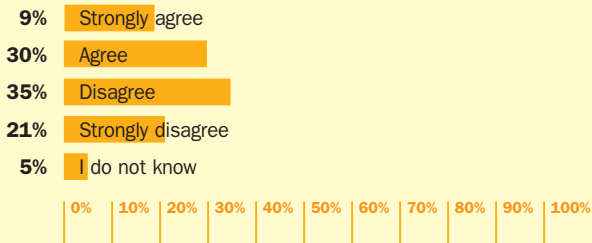
19%	Strongly agree
49%	Agree
25%	Disagree
3%	Strongly disagree
4%	I do not know

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Respondents' comments:

- "This completely depends upon the product. Greater functionality does not necessarily directly cause an increase in ramp-up time."
- "A great authoring tool cannot be effective unless the designer has sufficient design skills."
- "I'm too new to comment about the level of functionality in relation to level of difficulty where authoring tools are concerned. The authoring tool provided to me at work is confining to use. It is easy, but the templates are rigid. I would like to experience a more difficult tool with hopes of creating more challenging interactions within the courses I design. Since I am responsible for content and production, the time I have to learn new tools is also limited."

Conventional Wisdom about Content Authoring

Q6d. PowerPoint is an excellent e-Learning content authoring tool when it comes to capturing existing subject matter expert materials, presentations, and other forms of information and converting them into interactive formats that can be used in e-Learning applications

- **9%** Strongly agree
- **30%** Agree
- **35%** Disagree
- **21%** Strongly disagree
- **5%** I do not know

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Q6e. While most organizations have an abundance of source content and information assets, these are rarely used effectively or efficiently for the creation of e-Learning content.

- **33%** Strongly agree
- **44%** Agree
- **16%** Disagree
- **2%** Strongly disagree
- **5%** I do not know

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Respondents' comments:

- "PowerPoint can be a good starting point for collecting data, but reformatting a slide show as e-Learning where interaction is limited to page-turning is NOT effective!"
- "PowerPoint is an excellent tool for capturing existing SME materials, presentations, and other forms of information, but it is NOT an excellent (or even good) authoring tool for interactive e-Learning."
- "PowerPoint is an excellent tool for storyboarding an e-Learning course. Non-technical staff can use it easily."
- "PowerPoint can certainly be used to quickly create interactive materials out of SME materials. But that doesn't mean that we should. PowerPoint was designed for presentations, not CBT. I believe in using the right tool for the job."
- "I have no experience using PowerPoint as an e-Learning authoring tool, other than using presentations in the classroom. As a learner, I have participated in virtual classroom training and seminars and PowerPoint is excellent in that environment, particularly when used with the interactivity tools normally available in that environment."
- "PowerPoint? Puh-leeze. What a joke and a sad commentary on our industry if people view PowerPoint as an e-Learning tool. No wonder most "C" level execs think of their training departments as worthless. They're stuck in the 1950's worrying about multiple choice tests and getting people to memorize definitions while some companies are actually training their people to DO something — PowerPoint has nothing to do with people learning to DO something. PowerPoint and Breeze and that whole genre of "tools" are just the latest Emperor's New Clothes: 'Hey, now we can create lots and lots of ineffective, boring e-Learning quickly and cheaply — Oh Boy'."
- "This statement is a tough one. PowerPoint can be a good authoring tool if correct principles are applied. The problem is that anyone can use PowerPoint, and as a result these people are creating e-Learning that is neither creative nor effective e-Learning. It's just data slammed together. We have done some really effective e-Learning with PowerPoint / Breeze / Flash. But most of it done by non-instructional designers and e-Learning people is just plain garbage. But again, it's not the tool — it's how it's used and who's using it."
- "PowerPoint is often the format of the content sources we use for development, but for converting into interactive formats? Boo! The only interactivity I've ever seen in a PowerPoint used for standalone training is a NEXT and PREVIOUS button."
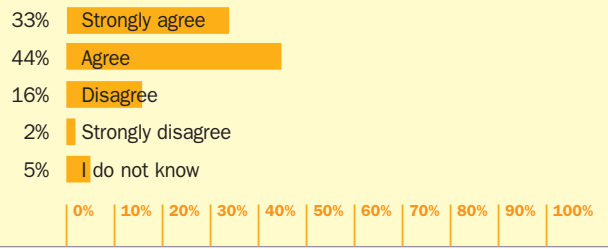
Respondents' comments:

- "Organizations have abundant source content, but they are very raw and ungrouped. So, when it comes to content creation for e-Learning, most organizations get confused in providing the apt or the right content. This can be resolved, if proper documentation procedures are used, which only a few organizations adopt."
- "I'm not sure that all organizations have an abundance of source content / information assets — our organization is definitely lacking. I also think that quality design can be sorely lacking in classroom offerings, so why should it be a surprise if it's deficient in online offerings. That's not to say that it takes the same skills, but if it's not always valued in traditional offerings, then it certainly won't be in new-age offerings. Both are all too often about doing it fast, just so we can say that we did it."
- "The reusability aspects of content development are still missing some convincing use cases. Some organizations and development teams already have reuse strategies, LCMSs, and other tools in place, but the reuse is usually limited to only that company or organization. Many large organizations are waiting for more progress to be made in the SCORM and CORDRA arenas before the benefits of reusing information assets can be truly realized."

Conventional Wisdom about Content Authoring

Q6f. Content is King.

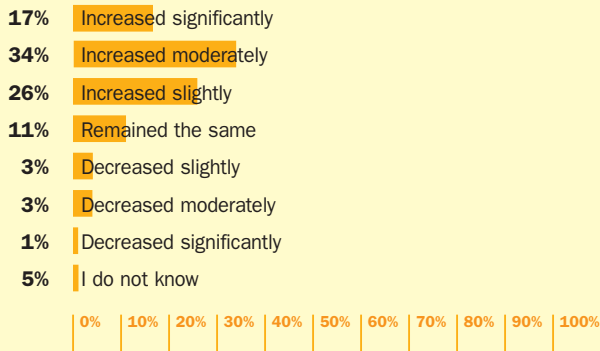|	
30%	Strongly agree
44%	Agree
21%	Disagree
3%	Strongly disagree
2%	I do not know

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Respondents' comments:

- "Good instructional design is King."
- "Content is King, and Design is his Queen. Training without both does NOT rule."
- "How content is presented is more important than content itself. This does not mean that content needs to be flashy and high-tech, but it does need to be logically modularized and presented such that the learner will retain it."
- "Our organization currently has an issue with SMEs believing that "Content is King" to the point that EVERYTHING must be included in the training course. It's a challenge to get them to accept that not all the content they have acquired over many months can be included in a one day, or multi-hour self-study course and expect the learner to actually retain it. Content can be king when minimized to the important points and organized effectively for maximum retention for recall."
- "Content cannot reign alone. It is time to share the throne. Good quality interactivity within an e-Learning product is equally important."
- "Content is the most valuable part in the beginning stages of the development process — and therefore in many ways content is King. But we also need equal parts of expertise in storyboarding that content, using the best tools for the RIGHT application, and mixing in media that is student, content, and feature appropriate. Having content and not knowing what to do with it or using it ineffectively leaves the student with a training experience that can impact them more for the worse than if they had not been trained at all."
- "Content can be important, however, e-Learning training courses must be instructionally sound to be effective. Engaging the student is important, but not just for the sake of interactivity. It has to make sense. Throwing content in a PowerPoint or other page-turner environment is the same as throwing your money away."

- "Content is not King. Learning objectives are all that matters."
- "I neither agree nor disagree, but the survey did not present that option. Excellent content can be so poorly presented as to be useless; excellent presentation skills can't compensate for missing content. A strong design has both."
- "Context is King. Boring content and boring e-Learning = no learning. Engaging content in the context of learning is needed for learning, period. Why would that change just because the learning is electronic? On the contrary, in e-Learning content must be engaging and relevant (context) or it most likely will not result in learning having taken place. A good authoring tool is needed in most instances to create the most engaging design, but good design trumps a good authoring tool. A good tool with poor design = bad e-Learning. A good tool with good design = engaging, relevant learning that is more likely to result in a change in knowledge, skills, and behavior."
- "The reason I selected Disagree for the statement "Content is King" is that I am defining content narrowly, as the information that has to come out of the efforts of building e-Learning (as opposed to the artifact that is delivered to the customer that conveys the information). Now that I've said that, my comment is that I rarely find issues about content explored in the popular research and discussions of design and development. Now, some of my clients may believe "Content is King" in the broader sense, although they would be satisfied with an eleven-page single-spaced memo outlining the latest features of a widget. (Better yet, just hand out the technical specs and let the learners pick out what they think is interesting or important.) But I will concede that clients are more impressed by the "Gee Whiz" of a Flash piece with pseudo interactivity — covering the content (narrow definition) in only the most general fashion — than they are with a solid piece that carefully presents what the learners need to know when they need to know it."
- "I think too much emphasis is placed on content in e-Learning. This is because people equate e-Learning with self-paced, solo learning that includes no person-to-person (that is, either learner-to-learner or learner-to-trainer) interaction. We have not yet taken advantage of the full possibilities of online learning that allow for knowledge to be co-constructed and applied as in Action Learning. Let the Knowledge Management people catalog the content and make it King."
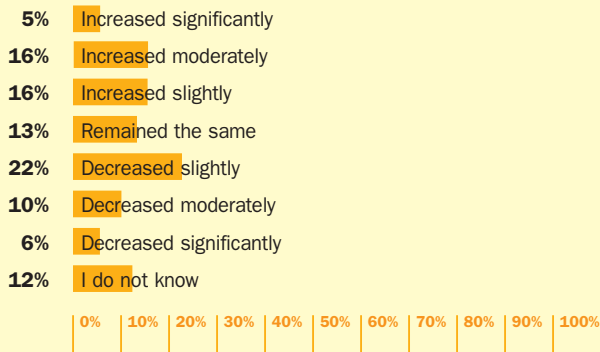- "The learner is King!"

Quality, Cost and Development Time

Q7a. In general, over the past three years the average quality of e-Learning content has:

%	Response
17%	Increased significantly
34%	Increased moderately
26%	Increased slightly
11%	Remained the same
3%	Decreased slightly
3%	Decreased moderately
1%	Decreased significantly
5%	I do not know

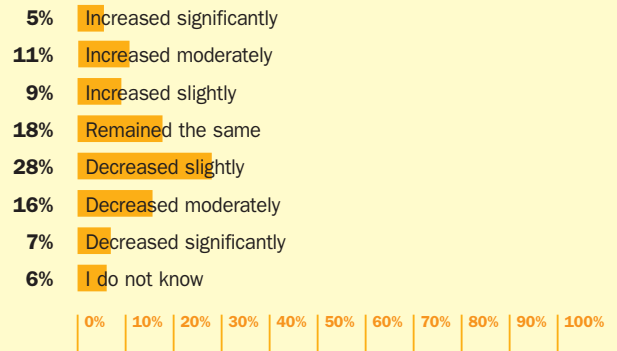0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100%

The majority of respondents (77%) indicated there has been an improvement in the quality of developed e-Learning content over the past three years, with 51% of respondents indicating there has been a moderate or significant increase. This significant improvement could be the result of improved tools, process, and practice.

Q7b. In general, over the past three years, the cost of authoring e-Learning content of average quality has:

%	Response
5%	Increased significantly
16%	Increased moderately
16%	Increased slightly
13%	Remained the same
22%	Decreased slightly
10%	Decreased moderately
6%	Decreased significantly
12%	I do not know

0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100%

These results show a fairly even split between those who think that cost has increased (37%) and those who think that cost has gone down (38%). Dr. Brand notes that "Cost elements are tied to a number of design and development components such as complexity of design, degree of interactivity, and the sophistication level of tools being used to create the e-Learning. Perhaps those citing a rise in cost are looking at e-Learning that has a higher degree of complexity & interactivity, while those seeing a lower cost are focusing on e-Learning being developed with tools that don't require a professional programmer."

Q7c. In general, over the past three years, the time it takes to author e-Learning content of average quality has:

%	Response
5%	Increased significantly
11%	Increased moderately
9%	Increased slightly
18%	Remained the same
28%	Decreased slightly
16%	Decreased moderately
7%	Decreased significantly
6%	I do not know

0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100%

A bare majority of respondents (51%) report a decrease in the length of e-Learning content development cycles. This decrease in cycle times could also be a function of the tools currently available, as well as developers' increased proficiency and increased knowledge of what needs to be done.

Content Authoring Practices in the Organization

Q8. Which of the following statements are true about your organization? (Select all that apply)

My organization:

76%	Creates e-Learning content for our own programs.
40%	Creates e-Learning content for other organizations' programs.
31%	Outsources the authoring of some or all of the e-Learning content.
12%	Builds and markets e-Learning authoring tools.
4%	Other
1%	Does not author e-Learning content for any purpose.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Q9. Does your organization currently have the resources to create your own content? (Select all that apply of either "yes" or "no" answers.)

83%	Yes. We have instructional designers.
81%	Yes. We have course developers.
72%	Yes. We have SMEs.
69%	Yes. We have project managers.
64%	Yes. We have Web developers.
61%	Yes. We have programmers.
56%	Yes. We have graphic artists.
2%	No. We use outside contractors to create our content.
2%	No. We will train employees to create our content.
1%	No. We do not create our own content.
0%	No. We will hire new employees to create our content.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

The majority (76%) of our respondents' organizations create e-Learning content for their own e-Learning programs indicating that content development is very much an in-house practice across this sample. At the same time 31% of respondents report that their organizations outsource at least part or all of this task. Many of our respondents selected both options indicating that content authoring requires a balance between in-house development and outsourcing.

Even though 27% of our respondents work for organizations that provide e-Learning products and services (refer to Question 3), 40% of respondents report that their organizations create content for other organizations.

Most of those who selected "Other" wrote that they are in the early stages of e-Learning and have not yet started with content authoring initiatives, although they are planning to do so.

Dr. Brand notes, "Given the availability of a wider set of authoring tools it is not surprising that about 75% of the respondents develop their own content. What is a little surprising, however, is the relatively low percentage of respondents who have indicated that their organizations outsource some or all of the e-Learning (31%). Is this a function of the organizational size? Are larger organizations more likely to outsource? Or conversely, are smaller organizations more likely to outsource?"
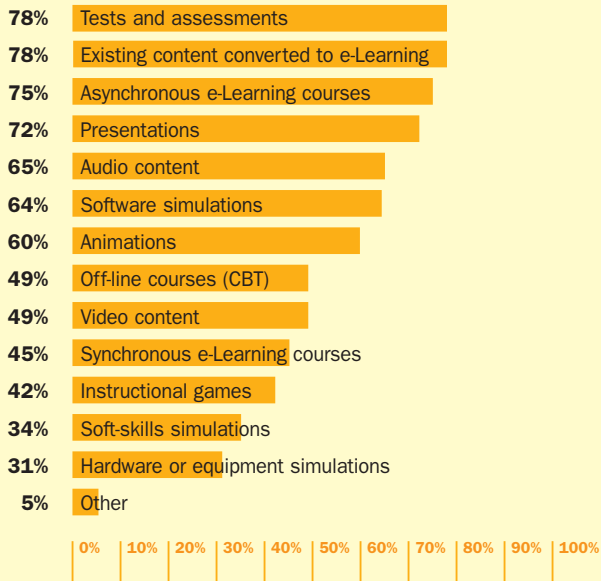
These results indicate that most organizations in the sample have the resources necessary for content authoring, whether they do so for their own or other organizations. The low percentage (2%) of respondents who selected the choice "No." We use outside contractors and vendors to create our content" as compared to the 31% of respondents whose organizations outsource at least some or all of their content development (refer to question 8) may indicate that the vast majority of those who outsource do so selectively and are also developing their own content.

The frequencies of the "yes" choices may indicate the relative importance of these job roles in the process of creating content. For example, it appears that instructional designers (83%) and course developers (81%) are far more common than programmers (61%) and graphic artists (56%), and this would support an argument that they are more essential to the task. We also note, however, that more than half of our respondents' organizations have all the key staff needed for quality, comprehensive content creation.

Dr. Brand points out, however, that "Based on the lower response percentages, graphic artists, programmers, and Web developers appear to be resources that organizations might be outsourcing. The one slight anomaly is the percentage of organizations who indicated they have SME's. Although 72% is a majority, it is somewhat surprising that it is not even higher. Is this a function of not having all the SME's they need to provide the content, or is there something else that is impacting this situation?"
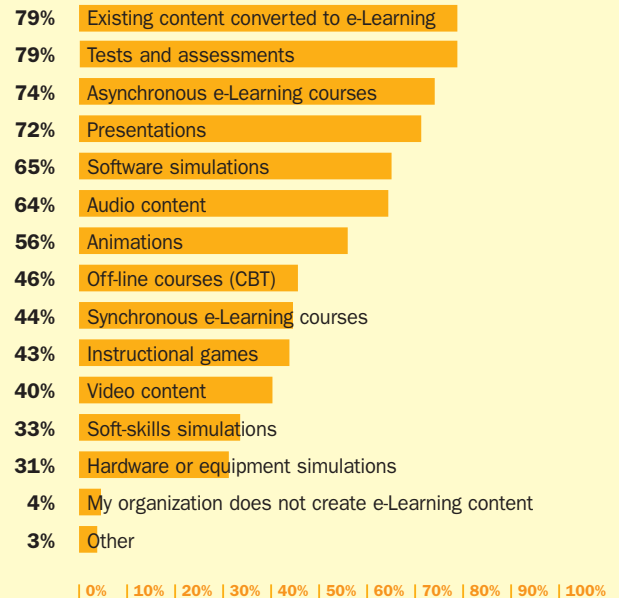
Content Authoring Practices in the Organization

Q10. What types of e-Learning content does your organization use — regardless of who creates it? (Select all that apply)

%	Content type
78%	Tests and assessments
78%	Existing content converted to e-Learning
75%	Asynchronous e-Learning courses
72%	Presentations
65%	Audio content
64%	Software simulations
60%	Animations
49%	Off-line courses (CBT)
49%	Video content
45%	Synchronous e-Learning courses
42%	Instructional games
34%	Soft-skills simulations
31%	Hardware or equipment simulations
5%	Other

Q11. What types of e-Learning content does your organization create — regardless of who uses it? (Select all that apply)

%	Content type
79%	Existing content converted to e-Learning
79%	Tests and assessments
74%	Asynchronous e-Learning courses
72%	Presentations
65%	Software simulations
64%	Audio content
56%	Animations
46%	Off-line courses (CBT)
44%	Synchronous e-Learning courses
43%	Instructional games
40%	Video content
33%	Soft-skills simulations
31%	Hardware or equipment simulations
4%	My organization does not create e-Learning content
3%	Other

It is not surprising that tests and assessments (78%), and repurposing existing content to e-Learning (78%), are the choices with the highest frequency. In discussing these results with Dr. Brand, he pointed out that the need for organizations to be able to demonstrate compliance in a variety of areas is aided by tests and assessments, and that repurposing existing content is a rapid development method used by organizations to expand the reach of their content more broadly and consistently. We agree that these are critical drivers for the use of these types of e-Learning content.
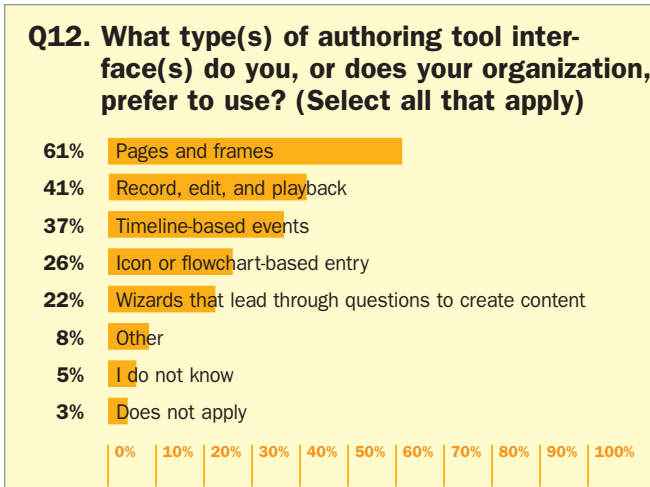
We also note that asynchronous e-Learning (75%) is significantly more common as a content type than synchronous e-Learning (45%). Is this a function of a greater need for on-demand access rather than being able to set aside time for a learning event? Also, audio content (65%) is more prevalent than video content (49%). Might this suggest that many organizations are still dealing with limited bandwidth availability?
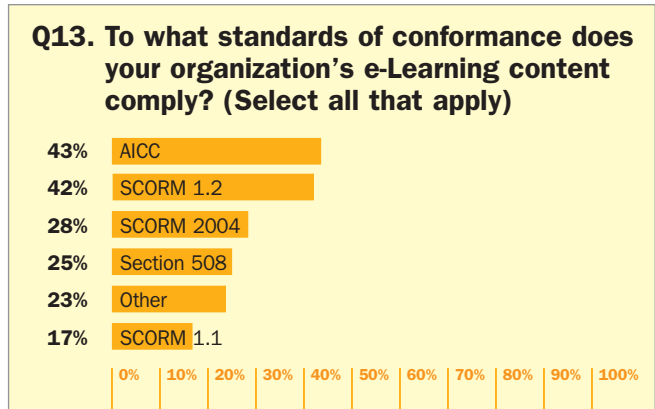
The results for Question 11 closely parallel those for Question 10 and is consistent with other results report for this survey. They suggest in large part that most organizations represented in this survey are creating much of their own content vs. having an external provider develop it for them.

Content Authoring Practices in the Organization

Q12. What type(s) of authoring tool inter-face(s) do you, or does your organization, prefer to use? (Select all that apply)

61%	Pages and frames
41%	Record, edit, and playback
37%	Timeline-based events
26%	Icon or flowchart-based entry
22%	Wizards that lead through questions to create content
8%	Other
5%	I do not know
3%	Does not apply

0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100%

We wonder if the pages and frames interface frequency (61%) is related to that interface's similarity to the metaphor of a book, suggesting that designers and learners prefer what they are most familiar with. The record, edit, and playback (41%) and the time-line-based events (37%) frequencies likely link to their usage in audio and video content production. A surprising element is the relatively low percentage or respondents' organizations (22%) that use authoring tools that have a wizard-based interface. This may be a function of perceived inflexibility of many wizard-based tools.

Q13. To what standards of conformance does your organization's e-Learning content comply? (Select all that apply)

43%	AICC
42%	SCORM 1.2
28%	SCORM 2004
25%	Section 508
23%	Other
17%	SCORM 1.1

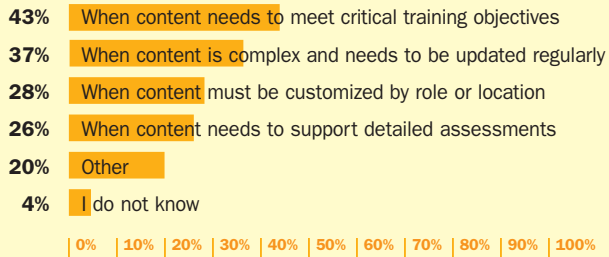0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100%

An almost equal percentage of respondents' organizations comply with AICC (43%) and SCORM 1.2 (42%). SCORM 2004 (28%), a relatively new standard, has yet to become as prevalent as many predicted. The "upgrade" by many organizations to SCORM 2004 may take longer than expected.

In *The Accessibility and Section 508 Report*, published by the Guild in January 2005, we noted that 29% of respondents polled in that survey reported that their organization complied with Section 508. The results of this survey are consistent with that earlier survey.

Nonetheless, these results still point to fairly widespread usage of older e-Learning standards. Is this a function of how challenging it is to migrate existing content to a new standard once it has been developed in an earlier standard, or does this relate to the difficulty of developing content in a new standard when the organization's experience base is with an earlier standard? Perhaps both factors are at play, and so many organizations may be having a problem with standardizing the standards themselves.

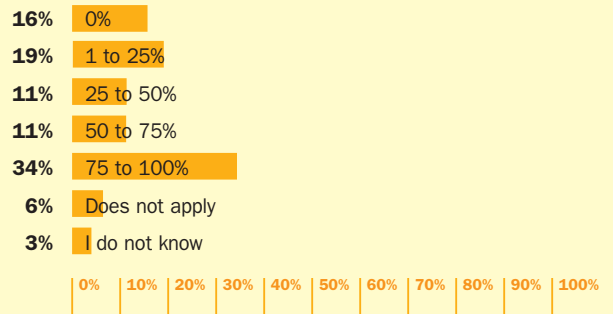# Content Authoring Practices in the Organization

Q14. When does your organization use a development team (e.g., project manager, instructional designer, media artist, interactivity developer, etc.) as opposed to a SME and/or a small unit of one or two contributors? (Select all that apply)

43%	When content needs to meet critical training objectives
37%	When content is complex and needs to be updated regularly
28%	When content must be customized by role or location
26%	When content needs to support detailed assessments
20%	Other
4%	I do not know

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Q15. What percentage of your organization's e-Learning content is created by a development team (e.g., project manager, instructional designer, media artist, interactivity developer, etc.) rather than a SME and/or a unit of one or two contributors?

16%	0%
19%	1 to 25%
11%	25 to 50%
11%	50 to 75%
34%	75 to 100%
6%	Does not apply
3%	I do not know

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

When there is a choice to use a development team or not, the decision is influenced first by critical training or business objectives, second by complexity or the need to update content, and third by customization requirements. We must note however that the frequency for every choice falls below 50%, indicating that for each of these suggested situations the respondents' organizations were at least as likely, if not more likely, to use a small SME-based team as compared to the more traditional larger development teams.

Of those who selected the "Other" choice, almost half, or 7% of the total sample, reported that they always use a development team no matter what the circumstances. About one-third, or 4% of the total sample, reported that they never use teams because their organizations or their "training departments" are too small and content creation is the job of just one or two professionals.
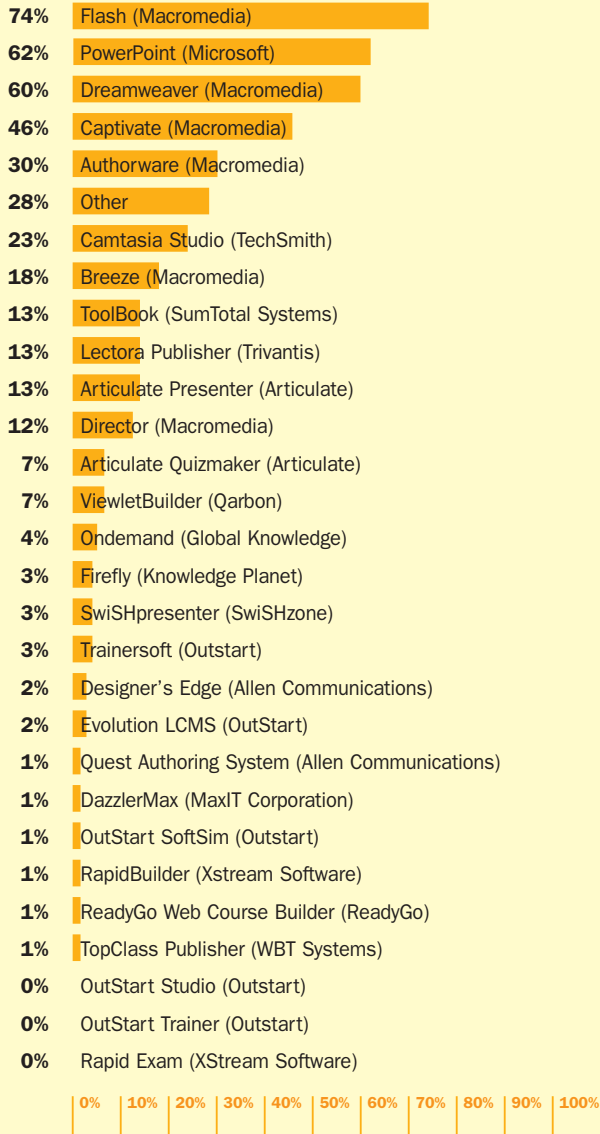
Approximately one-third of respondents' organizations use a development team at least 75% of the time. Included in this category must be the 7% of respondents' organizations that always use a development team (refer to Question 14).

However, we are hard pressed to explain why the "0%" category stands at 16% when only 4% who selected "Other" in Question 4 wrote-in that they never use a development team.

Dr. Brand offers the following analysis, "Reviewing the responses to this question indicates that one-third of the respondents use a 'traditional' development team the vast majority of the time (75% to 100%). The frequency for the other choices (0%, 1% to 25%, etc.) to this question are also significant, indicating that there is not universal alignment as to how organizations are using these larger development teams. What these results suggest is that either there is significant use of the smaller SME type teams (as indicated by the 11% to 19% range for the other choices) or there is significant use of vendors to develop content. However, the responses to the earlier questions are not suggestive of widespread vendor use by this survey's sample."
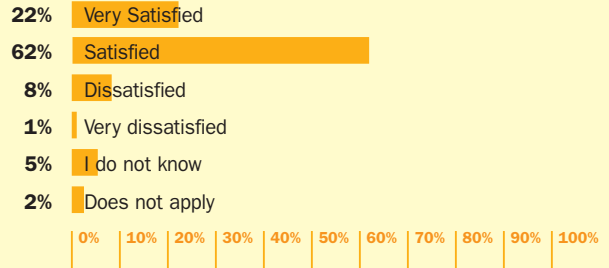
Authoring Tools

Q16. What authoring tools does your organization use to develop e-Learning content? (Select all that apply)

%	Tool
74%	Flash (Macromedia)
62%	PowerPoint (Microsoft)
60%	Dreamweaver (Macromedia)
46%	Captivate (Macromedia)
30%	Authorware (Macromedia)
28%	Other
23%	Camtasia Studio (TechSmith)
18%	Breeze (Macromedia)
13%	ToolBook (SumTotal Systems)
13%	Lectora Publisher (Trivantis)
13%	Articulate Presenter (Articulate)
12%	Director (Macromedia)
7%	Articulate Quizmaker (Articulate)
7%	ViewletBuilder (Qarbon)
4%	Ondemand (Global Knowledge)
3%	Firefly (Knowledge Planet)
3%	SwiSHpresenter (SwiSHzone)
3%	Trainersoft (Outstart)
2%	Designer's Edge (Allen Communications)
2%	Evolution LCMS (OutStart)
1%	Quest Authoring System (Allen Communications)
1%	DazzlerMax (MaxIT Corporation)
1%	OutStart SoftSim (Outstart)
1%	RapidBuilder (Xstream Software)
1%	ReadyGo Web Course Builder (ReadyGo)
1%	TopClass Publisher (WBT Systems)
0%	OutStart Studio (Outstart)
0%	OutStart Trainer (Outstart)
0%	Rapid Exam (XStream Software)

Q17. What is your organization's general level of satisfaction with the mix of tools you selected in Question 16?

%	Response
22%	Very Satisfied
62%	Satisfied
8%	Dissatisfied
1%	Very dissatisfied
5%	I do not know
2%	Does not apply

Clearly, our respondents' organizations are satisfied (84%) with their authoring tools. However, we note that the majority (62%) of those who indicate they are satisfied selected the "satisfied" choice versus the "very satisfied" choice. Does this indicate users are pleased, but not "wowed" by the tools? Is there room for new tools to gain market share, or is there too much inertia in favor of the established brands?

According to the results of this survey, one might be inclined to proclaim Macromedia as the king of content authoring tools. Somehow, without specifically intending to be an e-Learning company, Macromedia is nonetheless the provider of four of the top five most frequently selected authoring tools in this survey. Microsoft, another vendor not focused specifically on developing e-Learning software, also places in the top five with PowerPoint.

Thus, 30% or more of the survey respondents' organizations use only a few tools. It will be interesting to see if there is further consolidation of usage of these tools, or whether some of the less frequently used tools grow in adoption and popularity.
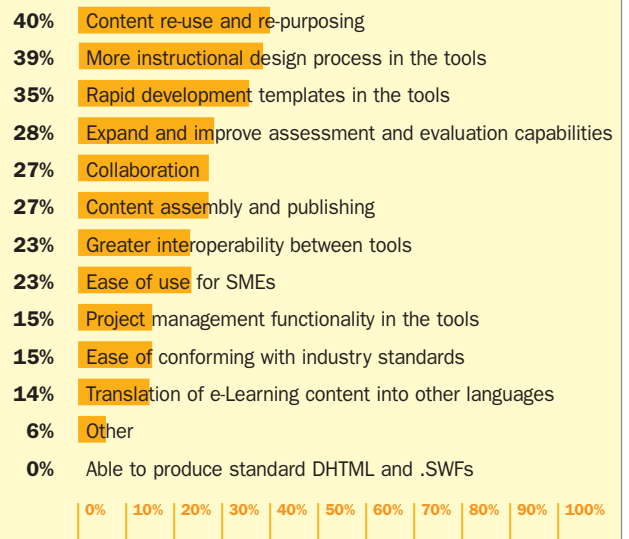
Authoring Tools

Q18. What three attributes of these tools most influence the level of satisfaction you selected in Question 17? (Select only three)

64%	Development speed
51%	Easy to use
41%	Conformance with industry standard (SCORM / AICC etc.)
32%	Easy to learn
32%	Value for the money
22%	Interface
19%	Other
13%	Help and support
7%	Documentation
4%	Installation and initial use
3%	Does not apply
3%	I do not know

0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100%

The two most frequently selected responses "Development speed" (64%) and "Ease of use" (51%) point to the growing requirement by most organizations to develop and deploy content at the "speed of business."

Q19. From the following list of product features which three would you most like to see enhanced in your organization's e-Learning authoring tools? (Select only three)

40%	Content re-use and re-purposing
39%	More instructional design process in the tools
35%	Rapid development templates in the tools
28%	Expand and improve assessment and evaluation capabilities
27%	Collaboration
27%	Content assembly and publishing
23%	Greater interoperability between tools
23%	Ease of use for SMEs
15%	Project management functionality in the tools
15%	Ease of conforming with industry standards
14%	Translation of e-Learning content into other languages
6%	Other
0%	Able to produce standard DHTML and .SWFs

0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100%

We note that the top three choices selected by the survey respondents for product feature enhancement prioritize content re-use and re-purposing (40%), increased instructional design process in the tools (39%), and rapid development of content (35%). It is difficult to judge whether respondents selected these features because they are the most important features or because they are the features that most need to be improved — or both. Either way, these results do offer some indication of the direction that product providers should be heading as they develop the next generation of content authoring tools.

To Learn More About this Subject

To learn more about this subject, we encourage you to search the following pages on the Guild's Web site using the keyword "content authoring."

The Resource Directory: http://www.e-LearningGuild.com/resources/resources/index.cfm?actions=viewcats

The e-Learning Developers' Journal: http://www.e-LearningGuild.com/articles/abstracts/index.cfm?action=view

*This survey generated responses from over 440 Members and Associates; these results are statistically significant and can be generalized to the entire Guild membership.

About the author

Joe Pulichino, Director of Research, The eLearning Guild

Joe Pulichino began his career in education as an English instructor at Rutgers University over 25 years ago. Since then he has held a number of senior management positions in the technology sector where he was responsible for the development, delivery, and marketing of a wide range of corporate education programs and services. Most recently he has served as vice-president of education services at Sybase, vice-president of eLearning at Global Knowledge Network, and CEO of Edu-Point. He is an adjunct faculty member of the Pepperdine University Graduate School of Education and Psychology where he is completing his Ed.D. in Education Technology. The focus of his research is on informal and organizational learning. Joe is principal of the Athena Learning Group, a virtual network of consultants and academics working in the fields of learning, knowledge management, performance enhancement and communities of practice.

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About the Guild

The eLearning Guild is a global Community of Practice for designers, developers, and managers of e-Learning. Through this member-driven community, the *Guild* provides high-quality learning opportunities, networking services, resources, and publications.

Guild members represent a diverse group of instructional designers, content developers, Web developers, project managers, contractors, consultants, managers and directors of training and learning services – all of whom share a common interest in e-Learning design, development, and management. Members work for organizations in the corporate, government, academic, and K-12 sectors. They also are employees of e-Learning product and service providers, consultants, students, and self-employed professionals.

The more than 19,200 Members and Associates of this growing, worldwide community look to the *Guild* for timely, relevant, and objective information about e-Learning to increase their knowledge, improve their professional skills, and expand their personal networks.

The eLearning Guild's Learning Solutions e-Magazine is the premier weekly online publication of *The eLearning Guild. Learning Solutions* showcases practical strategies and techniques for designers, developers, and managers of e-Learning.

The eLearning Guild organizes a variety of industry events focused on participant learning:
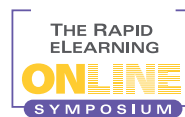
THE ELEARNING MANAGEMENT ONLINE SYMPOSIUM	DEVLEARN 2005	THE ELEARNING SIMULATION & GAMES ONLINE SYMPOSIUM	THE RAPID ELEARNING ONLINE SYMPOSIUM	GUILD 2006 THE ANNUAL GATHERING
October 5-7, 2005 ONLINE	November 16-18, 2005 San Francisco	February 15-17, 2005 ONLINE	March 15-17, 2005 ONLINE	April 18-21, 2005 Boston

eLearning Producer CONFERENCE	LEARNING MANAGEMENT COLLOQUIUM	THE ELEARNING FLASH DEVELOPERS' ONLINE SYMPOSIUM	THE ELEARNING INSTRUCTIONAL DESIGN ONLINE SYMPOSIUM	The eLearning Guild's ONLINE FORUM SERIES
April 18-21, 2005 Boston	April 18-21, 2005 Boston	June 14-16, 2005 ONLINE	July 26-28, 2005 ONLINE	Thursdays