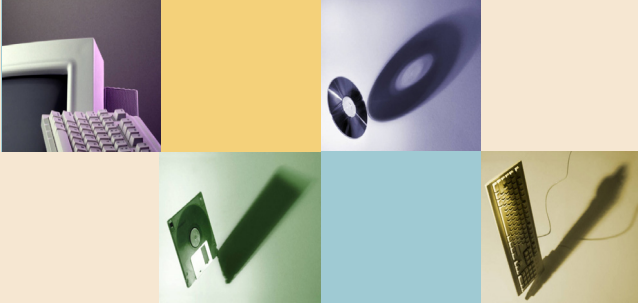




## Best Practices for eLearning




**Richard Schumacher**


 **CBIL**  
Center for Business, Industry & Labor


 **St. Louis Community College**

## Introductions




- **St. Louis Community College**
- **Workforce and Community Development**
- **Center for Business, Industry & Labor**
  
- **Richard Schumacher** – Mgr, Technology Initiatives




 **St. Louis Community College**


[www.cbil.org](http://www.cbil.org)      314.539.5310      3

## Online Instruction Advantages

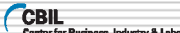


- **Self-paced learning**
- **Delivering content on demand / easy content distribution**
- **Content reuse and collection**
- **Application sharing and demonstrations**
- **Q&A via discussion groups (instructor/facilitator response is time sensitive)**
- **Provides both private (email to instructor) and public (discussion group) communications**
- **Ways to fairly easily monitor student progress and participation**
- **Economy of scale, larger class sizes**





 **St. Louis Community College** [www.cbil.org](http://www.cbil.org) 314.539.5310 4

## Issues with Online Instruction




- **Most developers and SMEs have not had the chance to experience an Internet-based course as a student – so they don't have exposure to what works and what doesn't**
- **This can create an “experimental” character to online activities**
  - **Difficult to gather success data**
  - **Difficult to interpret results**
  - **Difficult to interpret student perceptions**





 **St. Louis Community College** [www.cbil.org](http://www.cbil.org) 314.539.5310 5

## Issues with Online Instruction

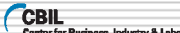


- **Internet-enabled courses are very different from traditional counterparts**
- **Need to educate students, instructors, clients and administrators about this different nature**
- **Students may need assistance with the online learning process and what is expected, usually requiring some face (or phone) time to help them get started or complete assignments**





 **St. Louis Community College**      www.cbil.org      314.539.5310      6

## Issues with Online Instruction




- **Online works best for asynchronous learning activities**
  - Practice testing
  - Content on demand
  - Content collection/distribution of materials
  - Self-paced learning
  - Centralized questions and answers
- **There is little benefit, except for the conveniences of location or application sharing, in synchronous online learning – for every other case, a traditional classroom is superior for synchronous learning**
- **Availability, and rapid response (returning emails, calls, etc), becomes vital in asynchronous activities**





 **St. Louis Community College**      www.cbil.org      314.539.5310      7

## Issues with Online Instruction



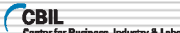
- **Disruption caused by changing technology**
- **Key online technologies (email, html, etc) have matured, and LMS systems have embraced them**
- **Common communication standards (XML) and online teaching packages (SCORM) are starting to mature – making for easier, platform independent deployments**
- **Still too many ways to create multimedia content (especially for animation and complex interactivity)**
- **All the vendors have a different approach to synchronous delivery**
- **Synchronous delivery has issues of cost, reliability, participation limits, network issues and high bandwidth requirements**




 St. Louis Community College


www.cbil.org 314.539.5310 8

## eLearning Design (ISO Usability)




- **Effectiveness: learner's ability to achieve specific goals in the environment, attainment of instructional objectives**
- **Efficiency: learner experiences minimal frustration and obstacles using the environment, how quickly and cost-effectively learning objectives are obtained**
- **Satisfaction: learner is comfortable and accepting of the system overall, encourages their desire to learn**




 St. Louis Community College


www.cbil.org 314.539.5310 9

## eLearning Design

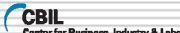


- **Instructional design selects suitable resources and activities that will engage learners and encourage them to make the connections necessary for learning to occur**
- **An online environment needs to be easy to use – obvious and instinctive**
- **eLearning is just another learning tool – like reading a book or instructor-led training – it’s not a “total solution”**
- **The biggest corporate eLearning issue is boring, low-quality content**
- **People learn best when they can learn exactly what they need at exactly the moment they need it**





 St. Louis Community College      www.cbil.org      314.539.5310      10

## eLearning Business Goals




- **Access any learning resource at any time from any place**
- **Reduce trainer, facilities and travel costs**
- **Standardized, consistent delivery (may be driven by unmonitored on-the-job training or legal issues)**
- **Scheduled training not meeting demand**
- **Economy of scale, reduced cost by increased efficiency**
- **More timely delivery (may be the result of a distributed workforce)**
- **Can be always up to date**
- **Not only for employees – also for customers, partners, suppliers, resellers**
- **More efficient “just enough” delivery – provide the exact content at the exact moment it is needed**




 St. Louis Community College      www.cbil.org      314.539.5310      11


## eLearning Barriers



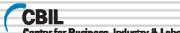
- **eLearning Barriers Facing Employees**
  - Personal or dispositional (least common)
  - Learning style
  - Instructional
  - Situational (most common)
  - Organizational
  - Content Suitability
  - Technological
- **Predictors of eLearning Barriers**
  - Organization
  - Self-efficacy
  - Computer competence
  - Computer training

Source: "The Seven E-Learning Barriers Facing Employees," University of Louisville, 2003





 [www.cbil.org](http://www.cbil.org) 314.539.5310 12

## eLearning Trends




- **Expect steady growth in the eLearning market**
- **More money is being spent on eLearning as a total percentage of overall budgets**
- **Focus shift to services and implementation (ROI, align learning objectives with business objectives) instead of technology and tools**
- **For business users, too much time is still being spent on the implementation phase**
- **eLearning products are starting to look alike**
- **Prices for LMSs and OTS content is dropping**
- **Emphasis on measurement and analytics – performance improvement and knowledge management is just as important as the learning component**





 [www.cbil.org](http://www.cbil.org) 314.539.5310 13

## eLearning Applications




- **Orientations**
- **Targeted, pre-developed learning**
- **Custom developed training**
- **Blended approach**
  - **Best-in-class teachers create content designed for classroom presentation guided by a live facilitator**
  - **Allows higher quality education in more topic areas at less cost**
  - **Interpersonal skills development always requires face-to-face interaction**
  - **Course/discussion approach (“distance learning”), OJT+eLearning, online pre-assessment**




 **St. Louis Community College** [www.cbil.org](http://www.cbil.org) 314.539.5310 14


## Need for Constant Updating



- **The sum total of human knowledge will double in 5 years**
- **By 2020, it is predicted to double every 73 days**

Source: “Integrating e-Learning into the Workplace,” Mohd Hishamuddin Harun, Medical Online Sdn Bhd



 **St. Louis Community College** [www.cbil.org](http://www.cbil.org) 314.539.5310 15

## Focus on Business Needs

The pie chart is divided into six segments, each representing a business need. The segments are: Time efficient (purple), Cost effective (blue), Impacts bottom line (purple), Improves performance (teal), Relevant (light blue), and Flexible (dark blue). The chart is set against a light beige background with a vertical striped pattern on the left side.

St. Louis Community College      www.cbil.org      314.539.5310      16


## eLearning Goals: Certification

- **Content becomes a study guide that reflects the end certification test**
- **Content narrowly focused on the test**
- **Pre-test and self-checks**
- **Competency roadmap – works well in a LMS**
- **Certification Test (a pattern in wrong answers indicates where content needs to be modified)**
- **Learner feedback – how well did the course prepare you for the test?**
- **Matches traditional “school” learning model**


St. Louis Community College      www.cbil.org      314.539.5310      17




## eLearning Goals: Performance




- Content is organized to reflect the learner's job
- Content narrowly focused on job tasks (role based and action-oriented)
- Tip sheets and job aids (measure page hits)
- Best placed in a project portal
- Performance monitoring by supervisor – has the course content influenced job tasks?
- Learner feedback – how did you use the course content on the job?
- Matches many corporate learning needs





 St. Louis Community College      www.cbil.org      314.539.5310      18

## Uses of Rapid eLearning




- Marketing
- Communication / Orientation
- Awareness
- Rapidly changing content
- Short training programs
- Environments needing a constant refreshing and retraining (such as healthcare)
- Legal requirements and mandates
- Surveys
- Part of a blended learning solution





 St. Louis Community College      www.cbil.org      314.539.5310      19

## eCBIL™ Standards

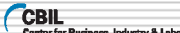


- Design criteria set upfront
- Strong learning goals and content presentation
- Multimedia experience
- Learner involvement and interactions
- Measurable results
- Business case – direct connection between learning and a defined business need
- Learner support services





 St. Louis Community College      [www.cbil.org](http://www.cbil.org)      314.539.5310      20

## eLearning System Selection




- Easy to develop courses, simple to learn how to use
- Easy to maintain or repurpose existing courses, allow modular design
- Easy to add and track learners
- Compatible with learner's environment
- Compatible with other products & systems
- Easy for the learner to use
- 508 accessible





 St. Louis Community College      [www.cbil.org](http://www.cbil.org)      314.539.5310      21

## Why Breeze?

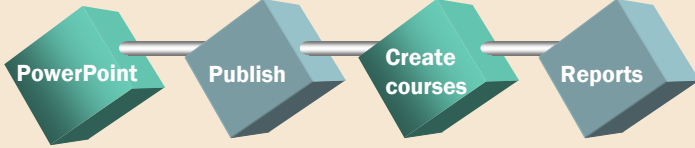
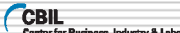


- **Uses PowerPoint for authoring, fast & easy**
  - Reduces time and resource constraints
- **Accessible anytime**
  - Internet access, low bandwidth needs
  - Flash player, firewall friendly
  - Sound card and speakers/headphones
- **Built-in quizzes check understanding**
- **Easy to add audio voice-over and sync with animation**
- **Transmit information quickly and consistently**
- **Section 508 accessible**





 St. Louis Community College      www.cbil.org      314.539.5310      22

## Breeze Process




Audio Text Animation Interactions Quizzes Surveys	Convert PPT to Flash	Enroll users Notify users Monitor course Open/close course	Completions Time in course Quiz scores Survey data
--	----------------------	---	---





 St. Louis Community College      www.cbil.org      314.539.5310      23

## eCBIL™ Specifications




- Length of Program
- Program Structure
- Testing
- Reports
- Graphics and Animations
- Template
- Disclaimer, Copyright, Legal
- Content
- Music
- Program Evaluation
- External Links
- Participant Materials





 St. Louis Community College      [www.cbil.org](http://www.cbil.org)      314.539.5310      24

## eCBIL™ Checklist




- Content
- Instructional Design
- Interactivity
- Navigation
- Motivational Components
- Use of Media
- Evaluation
- Aesthetics
- Tone





 St. Louis Community College      [www.cbil.org](http://www.cbil.org)      314.539.5310      25

## Is Compelling Training Possible?




- It's not the tools – it's the design
- Rapid eLearning is best for:
  - Broadcasting information
  - Critical knowledge transfer (conceptual learning)
  - When resources are limited and there is a need for high instructional integrity and content urgency
- How does problem solving, analysis, synthesis and critical thinking fit into the picture?





 St. Louis Community College      www.cbil.org      314.539.5310      26

## Demonstrations




- Examples from various materials developed by the Center for Business, Industry & Labor of St. Louis Community College
- To review these later, or show to others, go to:  
<http://www.cbil.org/helix2006>





 St. Louis Community College      www.cbil.org      314.539.5310      27

## Best Practices – Design/Delivery

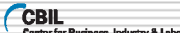


- **Create reusable templates**
- **Repurpose existing content**
- **Focus on “need to know” content**
- **Link to “nice to know” content**
- **Integrate pre- and post-program quizzes**
- **Use blended learning methods**
- **Remember the end result you’re looking for!**




 **St. Louis Community College**      www.cbil.org      314.539.5310      28


## Best Practices – Instructional Design



- **Apply adult learning theory with its emphasis on motivation, relevance, self-management, problem solving, and experiential learning**
- **Learners need to remain actively engaged in the course content through frequent interactivity, practice, feedback, and reinforcement**

Source: “Integrating e-Learning into the Workplace,” Mohd Hishamuddin Harun, Medical Online Sdn Bhd



 **St. Louis Community College**      www.cbil.org      314.539.5310      29

## Best Practices – Development

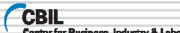


- Follow your development process, and make sure someone owns each step
- Analysis
- Design
  - Templates for layout and navigation
  - Storyboard in PowerPoint
- Production
  - Graphics, animations, photos, videos, music, audio
- Implementation
- Evaluation





 St. Louis Community College      www.cbil.org      314.539.5310      30

## Best Practices – Accessibility




- Flash player works with JAWS, Home Page Reader, and Windows-Eyes
- Visual elements must be available
  - Graphics and animations need text equivalents
  - Constant motion from transitions and animations may cause excessive screen reader refreshes
  - Make sure the narration can “stand on its own”
- Narration elements must be available
  - Add the narration transcript as the speaker notes
- Breeze 5 has additional features to enhance the experience for visually impaired users





 St. Louis Community College      www.cbil.org      314.539.5310      31

## Best Practices – Audio




- Always use a written script
- Make narration conversational
- Vary the voices – male/female, tone, inflections
- Narration should build on key points, not just read the text
- Synchronize narration with text and graphics
- Consider using music
- Narration should be able to stand on its own (for accessibility)




 St. Louis Community College


www.cbil.org 314.539.5310 32

## Best Practices – Text



- Follow basic guidelines for PowerPoint presentations regarding font size, type face, type colors, amount of text
- Sans Serif usually works better (Arial, Franklin Gothic, Verdana, Tahoma, etc), 26 points+
- Make your program look “un-PowerPointy”
- Create slide titles for all slides (appears in the outline display)
- Include narration as speaker notes (for accessibility)



 St. Louis Community College

www.cbil.org 314.539.5310 33



## Best Practices – Graphics

CBIL  
Center for Business, Industry & Labor

- Graphics need a similar look and feel
- Minimize clip art
- Take/use actual photos when possible
- Enter alt text for each graphic for accessibility



St. Louis Community College      www.cbil.org      314.539.5310      34

## Best Practices – Animation/Video

CBIL  
Center for Business, Industry & Labor


- Animations should add to, not detract from, the message
- Subtle transitions only
- Understand and test the impact of your graphics, animation, and video decisions on low-bandwidth users
- Video only when the message cannot be communicated any other way – make it short!




St. Louis Community College      www.cbil.org      314.539.5310      35

## Best Design Practices – Interaction


- Create meaningful interactions
- Interactions have to be planned
- Provide custom feedback
- Use techniques such as rhetorical questioning
- Allow for non-linear progress (hyperlinks and action buttons)




 St. Louis Community College [www.cbil.org](http://www.cbil.org) 314.539.5310 36

## Best Practices – Technical


- Consider available bandwidth of users
- Follow security best practices for server
- Use appropriate LMS database store (SQL)
- Customize look of eLearning interface for your organization
- Always review the published version before releasing it to your participants
- Identify the software tool’s unique “quirks” and determine how to handle them upfront




 St. Louis Community College [www.cbil.org](http://www.cbil.org) 314.539.5310 37

## Best Practices – Blended Approach


- **Set up sessions for learners to discuss what they had learned and how they could apply it to their jobs**
- **Knowing in advance there will be discussion sessions reinforces learner focus and accountability**




 **St. Louis Community College** [www.cbil.org](http://www.cbil.org) 314.539.5310 38


## Future Trends

- **Courses about a specific product or business process need to dynamically link to core critical documents (job aids, procedures, etc)**
- **Integration of document management and learning**
- **Content needs to be indexable by document management systems**
- **Online communities of practice**





 **St. Louis Community College** [www.cbil.org](http://www.cbil.org) 314.539.5310 39

## Latest Trends

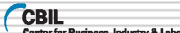


- Podcasts (audio and video)
- Wikis
- Blogs
- Webcasts
- Learning on game platforms (PlayStation Portable, Xbox, etc)
  
- These are only enablers, new technologies only succeed if they help people learn
- Always goes back to the quality of the learning experience





 St. Louis Community College      www.cbil.org      314.539.5310      40

## Challenges and Opportunities



- How could rapid eLearning work in your organization? With your workforce clients?
- Are there clearly identified needs? What approach could be taken to developing, implementing and evaluating the business case?
- Who is responsive/excited about the possibilities?
- What are the challenges?
- What are the next steps?



 St. Louis Community College      www.cbil.org      314.539.5310      41



• **For more information contact us:**  
[www.cbil.org/helix2006](http://www.cbil.org/helix2006)  
**314.539.5310**  
[rschumacher@stlcc.edu](mailto:rschumacher@stlcc.edu)




**St. Louis Community College**




**St. Louis Community College**

[www.cbil.org](http://www.cbil.org) 314.539.5310 42


## Best Practices for eLearning



# Questions?



Center for Business, Industry & Labor



**St. Louis Community College**