

Running head: FORMATIVE EVALUATION – LECTORA TRAINING

**TRAINING FOR RAPID APPLICATION
DEVELOPMENT OF WBT USING LECTORA**

A FORMATIVE EVALUATION

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Table of Contents

Table of Contents 2

Abstract..... 3

 Purpose 3

 Background..... 3

 Scope 4

Product Description..... 4

Program Components..... 5

 Training Elements 5

 4-Hour Authoring Workshop..... 5

 Mentoring..... 5

 Prototype..... 6

 Best Practices 6

 Role Integration..... 6

 Project Manager 7

 Instructional Designer..... 7

 Creative Lead 7

 Editorial 8

 Programming..... 8

 Producer..... 8

Stakeholders..... 9

 Internal Stakeholders..... 9

 Clients..... 9

 Project Staff 9

Evaluation Procedures/Methods 10

 Approach and Methodology 10

 Expert Review..... 10

 One-to-One Evaluation..... 11

 Small Group Evaluation 12

 Specific Objectives..... 13

Instrument..... 14

Training 14

Best Practices..... 16

Role Integration 16

Data 17

 Collection..... 17

 Analysis 19

Conclusions..... 21

 Recommendations 22

Appendix 23

 WBT Development Process..... 23

 Workshop Training Outline..... 24

 Content Authoring Process Overview - Using Lectora..... 26

Abstract

Purpose

The purpose of this formative evaluation is to provide structured input for improving the instructional tools and training, developed to support the rapid application development process for Web-based Training (WBT), within Carlson Marketing Group (CMG). In the broader view, the evaluation is expected to provide insights leading to refinement and improvement of the process itself.

Background

CMG designs, develops, and implements WBT for its clients worldwide, as part of a broader strategy for delivering Workplace Learning and Performance (WPL) interventions. CMG employs instructional designers, writers, and graphic artists for creating instructional content delivered via the Web and through live training events. Depending on the scope of the project, and competing resource requirements, some or all of the resources listed may be external contractors with varying experience levels and perspectives on the process.

Approximately eighteen months ago, the WPL team in Detroit conducted an internal review and reengineering initiative of its WBT development processes with the goal of increasing efficiency, repeatability, and consistency, while reducing development time and costs. A high level overview of the current process has been included as an appendix to this report.

Adoption of the process required redefining some roles and responsibilities within the WBT development teams, and adopting the use of authoring software tools for creating Web-based content. Each of these changes carries unique challenges.

Scope

The scope of the evaluation is limited to the instructional materials and communications for training team members on the new process and tools. As mentioned in the purpose, the evaluation is also expected to provide insights leading to refinement of the process and the ways in which the project phases are implemented.

Product Description

The WPL team has selected a commercial software authoring tool for creating AICC or SCORM compliant web-based training with level 1 (knowledge) and level 2 (comprehension) learning objectives. The product used is Lectora Enterprise Edition 2004, from Trivantis Corporation (www.trivantis.com). Lectora is a Windows-based authoring tool for creating web-based training content, which may be accessed on either Windows or Macintosh computers. It's primary uses, listed in order of product fitness are (2003 brandon-hall.com):

- Standard courseware development
- Training and assessments
- Online presentations
- Software simulation development
- Multimedia presentations/entertainment
- Instructional games
- Animation
- Other simulation

Trivantis provides a separate CD with Lectora containing e-Learning templates, and another providing a tutorial. Trivantis claims the product has a zero learning curve

for an instructional designer or writer familiar with basic Microsoft Office applications such as Word and PowerPoint. In practice, some learning time is required to gain proficiency.

Program Components

Training Elements

The training model adopted applies a mentoring approach to learning the Lectora toolset and applying the process. The training component of the program consists of three elements: a 4-hour authoring workshop, mentoring, and skills development by constructing a prototype. Once the design document and creative treatment have been approved (please refer to process diagram in appendix), the template is created using Lectora, and the Content Author is trained via the Authoring Workshop. Immediately following training, the Content Author collaborates with programming and creative to produce the product prototype.

4-Hour Authoring Workshop

Content authors receive four hours of hands-on training in Lectora, using the template that has been created for the course. This may be in a classroom setting or one-on-one with a content author and an assigned mentor. An outline of the training session has been included in the appendix.

Mentoring

During the workshop, the content author is assigned a mentor to answer any questions the author may have, provide recommendations, and help to establish and document best practices. This mentoring continues throughout the life of the project.

Prototype

A key deliverable from the design phase of the project is a confirmation prototype for the project, tying together the content outline (from design document), creative theme, navigational elements, and sample interactive exercises. The prototype is produced during a one to two week period following the workshop, requiring close collaboration between the designer, content author, creative, mentor, and Web programmer

Best Practices

Best practices result from collaboration between the content author, creative, and programmer to determine alternative methods to implement the instructional strategies called out in the design document. As a result, best practices should reinforce and preserve the instructional integrity for the course, (e.g., use of learning checks to positively effect pacing in longer lessons) while creating efficiencies for the content author (e.g., copy and past a rollover effect for reuse across modules.) A mechanism for documenting best practices is needed to provide a common forum or FAQ page for all stakeholders to share information.

Role Integration

Roles, in some cases, have been intentionally left vague in order to avoid formal job descriptions. The reason for this is to allow individuals to grow in development of new skills without being artificially limited in a distinct role. A one-page process overview linking tasks in Lectora to roles is provided during the authoring workshop to provide a context for the training session. (A copy of the content authoring process overview has been provided in the appendix.) One of the stated goals of the process reengineering effort was to flatten the organization by decreasing the number of roles

involved in producing a WBT course, to increase flexibility and efficiency, in order to become a more nimble eLearning delivery organization. This does not ignore the fact that there are key positions requiring experienced people for every project in order to ensure that client expectations are met on a consistent basis. In some cases, a single individual may fill two or more roles depending on the scope of the project. Essential roles include the Project Manager, Instructional Designer, Creative Lead, Editorial, and Programming. With complex delivery requirements, there may be the additional role of Producer. Each of these roles is described below.

Project Manager

The primary role of the Project Manager is to ensure that client expectations are being met or exceeded in terms of timing, budget, and milestone deliverables. This includes administrative support in scheduling review meetings, and overall responsibility for managing the budget and timeline.

Instructional Designer

The role of the Instructional Designer is to analyze business requirements for performance improvement, environment, and learner characteristics. Based upon this analysis, the Instructional Designer provides a detailed design covering appropriate instructional strategies, delivery medium, and assessment methods to ensure that learning and performance objectives are met.

Creative Lead

The role of the Creative Lead is twofold. First, to ensure that thematic decisions regarding the Web look and feel are aligned with the client culture, provide a memorable learner experience, and support the learning objectives for the project. Second, is to

provide production level support during development by creating and managing the library of assets to be included in the instructional content.

Editorial

The editorial role is primarily manifested in the Content Author. The Content Author researches the content identified in the analysis, and develops the content ‘pages’ for the course with strict adherence to the design document. A secondary, though extremely important, editorial role is that of the Proofreader for correctness, accuracy, and appropriateness to the audience.

Programming

The role of the Programmer is to serve as a technologist providing programming support for the Lectora, and for any required custom development to implement the instructional strategies (e.g., Flash interactions, games, simulations, etc.). During the implementation phase, the Programmer is responsible for ‘publishing’ the course to create the software artifacts, and to verify suitability of the program elements in the client’s hosting environment (i.e., alpha testing).

Producer

The Producer is not a separately defined role per se. The closest we come to this is in the IT Project Lead. The role of the producer is to provide oversight and integration of the other roles to make sure that the Instructional Designer, Creative Lead, Content Author, and Programmer are all talking to each other to produce the course as it was designed. The Producer works in concert with the Project Manager to ensure that budget and timing constraints are adhered to.

Stakeholders

Internal Stakeholders

In addition to the roles described under the program components section above, another group of stakeholders includes the sales team and financial teams. These groups have a vested interest in the profitability of the projects that are delivered, and in expanding the client relationship by increasing the business opportunity. These groups are not directly involved in this evaluation since they are not direct participants in the training program.

Internal stakeholders invited to participate in the evaluation are those individuals supporting the roles described in the program components section above.

Clients

Clients are materially affected by the outcomes of the program being evaluated. This includes the quality of the deliverables, the number of different people they need to interact with, and the ultimate effectiveness of the training products being produced. Therefore, clients have been asked to participate in the evaluation, as described in the evaluation procedures below.

Project Staff

The project staff for the evaluation includes one evaluator, and two senior level training managers who have reviewed and validated the instruments prior to conducting the evaluation.

Evaluation Procedures/Methods

Approach and Methodology

As in other comprehensive formative evaluations, a variety of methods have been employed to offer up a complete picture of the training program. The approach taken consists of expert review, followed by one-to-one evaluations and finally, small group evaluation. The application of each is briefly described below.

Expert Review

Following the process reengineering effort to look at skills training, best practices, and roles, the workshop-training outline was developed to determine the order and depth of the content to be covered. An expert review was conducted internally by training, project management, and the eLearning manager to validate the workshop program.

(Note: A copy of the revised outline has been included in the appendix.) The purpose of the expert review was to validate the content and materials created for training on the process and tools.

The expert reviews were carried out informally, in advance of the one-to-one evaluation, using a series of standard pre-determined questions:

1. Are the topics consistent with the behaviors we are attempting to create and reinforce?
2. Is the amount of time allocated, and level of detail appropriate for the intended audience (i.e., Instructional Designers and Writers)?
3. Is the order of presentation for the topics logical and understandable?
4. Is the selection of topics appropriate for the objectives set for learners, relative to the overall process for developing web-based training?

Feedback received resulted in revisions to the training outline, selection of examples, and creation of the roles and responsibilities matrix to use as a job aid. The revised materials were subsequently sent back to the experts for validation.

One-to-One Evaluation

A number of business circumstances conjoined to create a delay of approximately two months between the time that the training materials were finalized and when it was feasible to conduct one-to-one evaluations. Two one-to-one evaluations were conducted using the same set of criteria to assess the intrinsic qualities of the training materials and the learning effects of the instruction. The three main criteria used to gage effect of instruction on learner performance were:

- Practice performance during the workshop
- On-the-job performance immediately following the workshop (1-2 days)
- Effective use of mentors to build skills and increase confidence

Learner acceptance and motivation were also considered as factors affecting organizational learning and ongoing process improvement efforts to increase efficiencies and reduce costs. Although the selection of learners to participate in the one-to-one evaluations was random, driven by the needs of the business and specific projects, it worked out well. The first learner (Learner A) was highly motivated and quickly able to assimilate new tools, practices, and processes. The second learner (Learner B) was more apprehensive, and exhibited some anxiety over learning a new tool and process while still meeting fairly aggressive production deadlines. In reality, these conditions typify the culture for the organization. As a peer, Learner A was able to act as a mentor for Learner

B, providing qualitative evidence in support of the mentoring component of the training program.

Learner input was encouraged during the training and also during debriefing covering materials and instruction. A key finding was that learners found the workshop to be most productive when they were provided a context for how they will apply the specific tools. In the case of Learner A, the template for the course he would be working on was not fully developed at the time of the workshop. He was, however, able to gain access to the template the next day and was productive almost immediately as a result. Learner A was very comfortable working with his mentor/coach to gain answers to questions and best practices. Learner B actually transitioned to the same project that Learner A was assigned to. What this meant, was that not only did Learner B have the template available, but also a completed module to serve as a prototype. This proved helpful in the transition, by addressing personal learning styles between the two different learners. The one-to-one experiences were noted in terms of preparing the learner environment (i.e., having the template available), however, did not have a major impact on instructional content or delivery method.

Small Group Evaluation

Two group workshops were conducted on the same day, one in the morning and one in the afternoon. The morning group consisted of six participants while the afternoon group had four participants. The instruction designer facilitated the instruction for both groups. The focus of the evaluations was on learner performance, and on how the instruction is used by the learners and the instructor. As in the one-to-one evaluations, participants for the groups were based on project-driven business needs. For this reason,

along with timing and budget considerations, there was no pre-test or attitude survey distributed to the learners prior to the workshop.

A formal evaluation instrument was created and validated for measuring the effect of learning on the learners' attitudes, confidence level, process understanding, and transfer to the job. This approach was taken given the intrinsic relationship between the training, culture and environment for learning, and impact on organizational effectiveness. A copy of the instrument is included in this report.

Specific Objectives

There were four objectives set for the group evaluation to lead to overall improvements to the program:

1. Effectiveness. Determine and make improvements to the effectiveness of the program observing learners' performance, identification of potential gaps, and changes to training, best practices, and role integration to close the gaps.
2. Efficiency. Identify methods and processes to improve program efficiencies for delivering higher quality web-based training course in less time, consuming fewer resources.
3. Useable. Ensure that program components (i.e., training, best practices, and role integration) can be successfully and consistently implemented for intended audiences (in potentially multiple locations) with little or no modification.
4. Appealing. Develop and support process and training materials so that learners will want to use the instruction.

Instrument

TRAINING FOR RAPID APPLICATION DEVELOPMENT OF WBT USING LECTORA

PARTICIPANT QUESTIONNAIRE

Instructions: For each of the statements listed below, please indicate your level of agreement or disagreement by placing an X in the appropriate box. The numbers go higher, based on your level of agreement as follows:

1 Strongly Disagree	4 Agree
2 Disagree	5 Strongly Agree
3 Neither Disagree or Agree	NA Not Applicable

Training						
Workshop (4-Hour Lectora Training Session)						
I understood the purpose of the training session prior to attending.	1	2	3	4	5	NA
I had the necessary skills and experience to understand the instruction presented.	1	2	3	4	5	NA
The amount of material covered was appropriate for the time allowed.	1	2	3	4	5	NA
The examples provided covered most of the things I need to do with Lectora.	1	2	3	4	5	NA
The hands-on exercises helped me to become comfortable using the tools in Lectora.	1	2	3	4	5	NA
As a result of the workshop, I felt confident that I could begin working on my own.	1	2	3	4	5	NA
<p><i>Please provide additional comments on things you liked, things you didn't like, and ways to improve the Lectora training workshop.</i></p> 						

Mentoring (Expert Assistance Using Lectora)						
The mentoring model for getting coaching and assistance was explained to me.	1	2	3	4	5	NA
When I called my mentor/coach, I was able to get my questions answered promptly.	1	2	3	4	5	NA
I was able to obtain examples of different interactions (e.g., rollover, pop-up) to use in my course.	1	2	3	4	5	NA
I am comfortable learning new skills (i.e., Lectora) as long as I have someone I can go to for help.	1	2	3	4	5	NA
Getting answers to my questions by calling a mentor is quicker than trying to figure it out on my own.	1	2	3	4	5	NA
At the end of development of my course, I will feel comfortable enough with Lectora to mentor other users.	1	2	3	4	5	NA
<i>Please provide additional comments on things you liked, things you didn't like, and ways to improve the Lectora mentoring model for user support.</i>						
Prototype (Sample Module Built in Lectora)						
I understood the requirement to build a prototype and what was expected in the prototype delivery.	1	2	3	4	5	NA
Working with the other team members (i.e., creative and programming) helped to increase my comfort and skill level with Lectora.	1	2	3	4	5	NA
Building the prototype helped me to better understand the workflow in rapid application development of Web-based training.	1	2	3	4	5	NA
Building the prototype gave me a greater sense of ownership in the course development process.	1	2	3	4	5	NA
<i>Please provide additional comments on things you liked, things you didn't like, and ways to improve learning using Lectora in the prototype phase of the project.</i>						

Best Practices						
Working with my mentor and/or Trivantis support, I was informed of best practices to include in the course I was working on.	1	2	3	4	5	NA
I learn better by observing and finding out how others may have solved a particular problem.	1	2	3	4	5	NA
There are tips and hints that I've discovered that would be beneficial to others working in Lectora.	1	2	3	4	5	NA
I am willing to capture and share best practices based upon my experience to help benefit others.	1	2	3	4	5	NA
I have made inquiries on my own to ask other people what has worked best for them.	1	2	3	4	5	NA
<i>Please provide additional comments on things you liked, things you didn't like, and ways to improve the process of sharing best practices using Lectora.</i>						
Role Integration						
I understand my role and what I am responsible for delivering to the project team.	1	2	3	4	5	NA
I have the tools and support necessary to do my job.	1	2	3	4	5	NA
I understand the rolls of my other team members (i.e., designer, writer, creative, systems, project management) and where hand-offs need to occur.	1	2	3	4	5	NA
I am comfortable stepping outside of my role to learn new skills or to help meet delivery deadlines.	1	2	3	4	5	NA
<i>Please provide additional comments on things you liked, things you didn't like, and ways to improve the communication and integration of different roles within the development team.</i>						

Thank you for your participation and cooperation by completing this questionnaire!

Data

Collection

Surveys were sent out to sixteen people in the roles described above, via email.

The number of responses was four, or 25%. The distribution and return is summarized in the table below.

Title	Surveys Sent	Surveys Returned
Project Manager	2	0
Instructional Designer	3	1
Creative Lead	0	0
Editorial	8	2
Programmer	2	0
Producer	1	1
Total	16	4

The actual survey responses are summarized in the following table, for each question and category. The score for each question is on a scale of 1-5, with 5 being the highest. Verbatim comments have also been included.

Training - Workshop	
I understood the purpose of the training session prior to attending.	4.5
I had the necessary skills and experience to understand the instruction presented.	4.75
The amount of material covered was appropriate for the time allowed.	4
The examples provided covered most of the things I need to do with Lectora.	3.5
The hands-on exercises helped me to become comfortable using the tools in Lectora.	3
As a result of the workshop, I felt confident that I could begin working on my own.	3.5
	3.8

Comments:

I would like to see a tutorial designed specifically for workshop application. There was too much switching between the built-in Lectora Tutorial and the TVA course. We couldn't do any hands-on experimentation with the TVA course.

Would have been to have the image files needed to actually craft a pop-up and roll-over... that's the only part that was tough to practice on until the course template and associated files were received.

Less time about philosophy and process, more hands-on time needed in the training.

Training - Mentoring	
The mentoring model for getting coaching and assistance was explained to me.	3.5
When I called my mentor/coach, I was able to get my questions answered promptly.	4
I was able to obtain examples of different interactions (e.g., rollover, pop-up) to use in my course.	3.5
I am comfortable learning new skills (i.e., Lectora) as long as I have someone I can go to for help.	5
Getting answers to my questions by calling a mentor is quicker than trying to figure it out on my own.	5
At the end of development of my course, I will feel comfortable enough with Lectora to mentor other users.	3.5
	4

Comments:

Our development timelines have been so short that I've been trying to keep things simple enough so I can do it without calling a mentor.

What would be useful (given the time) is some guidance on when it's instructionally most appropriate to use certain actions or features (e.g., a click vs. a rollover, or a drag-and-drop exercise vs. a matching exercise, etc.)

Other than you offering to take calls with questions, I can't say as I remember this part at all?

The Mentoring process was not clear to me from the training. Two hours with a mentor, one-on-one, would have been more effective for me.

I obtained my own samples through my own diligence. None were provided to me.

Training - Prototype	
I understood the requirement to build a prototype and what was expected in the prototype delivery.	3.5
Working with the other team members (i.e., creative and programming) helped to increase my comfort and skill level with Lectora.	3
Building the prototype helped me to better understand the workflow in rapid application development of Web-based training.	1.5
Building the prototype gave me a greater sense of ownership in the course development process.	2
	2.5

Comments:

Is this referring to the practice we did in the training? If so, I would hesitate to call it "a sample module." Not enough time spent on this.

In my particular case, it has been quite difficult to spec art to meet the requirements of the Creative department and still stay within budget parameters. We have been proceeding on the basis of the client's preference for illustration vs. text.

Turns out that there aren't enough hours spec'd for either:

- The writer to design the screens so they don't need an illustration to engage the learner
- The artist to find and prepare artwork for every screen to engage the learner.

Don't think this applies to me... other than your up-front explanation for "why" Lectora and the sequence of events (who does what), I don't think we did this and if we did, I don't think it was couched in these terms... does adding the text boxes and practicing with some of the other functionality what this is?

Best Practices	
Working with my mentor and/or Trivantis support, I was informed of best practices to include in the course I was working on.	2
I learn better by observing and finding out how others may have solved a particular problem.	5
There are tips and hints that I've discovered that would be beneficial to others working in Lectora.	3.5
I am willing to capture and share best practices based upon my experience to help benefit others.	5
I have made inquiries on my own to ask other people what has worked best for them.	3
	3.7

Comments:

I created and distributed my own best practices list.
 I did not receive best practices from anyone else.
 It would have been better to receive this first!

I think best practices are only going to work for experienced users, or within the context of an example tutorial designed specifically for training.

Role Integration	
I understand my role and what I am responsible for delivering to the project team.	5
I have the tools and support necessary to do my job.	3.7
I understand the rolls of my other team members (i.e., designer, writer, creative, systems, project management) and where hand-offs need to occur.	3
I am comfortable stepping outside of my role to learn new skills or to help meet delivery deadlines.	4.7
	4.1

Comments:

It feels like the bugs are still being worked out. Also, internal interaction will probably be much different (for project managers and programmers) than working with external writers. And each project will vary slightly, of course.

Analysis

Overall, the responses indicate general support for the program, with an average overall score of 3.62 out of 5. Survey respondents felt most comfortable with the

mentoring/coaching model for training in which they can consult with an 'expert' when they get stuck. Two areas found to be lacking are: 1.) A central repository or method for sharing best practices between content authors and projects, and 2.) Access to a library of other courses created in Lectora, to 'borrow' from. In general, having access to job aids and relevant examples provides reinforcement to the learning.

Survey respondents appear comfortable in knowing their role and what is expected of them. They are less clear on the roles and responsibilities of other team members, particularly the functional groups (e.g., creative and systems). A key takeaway is that all respondents appear willing to step outside of their boundary, and would like to learn more about the overall instructional design process.

The small group training sessions appear to fall short of expectations. This is consistent with the preference towards having a coach for one-on-one training interventions and concrete examples. Respondents did not view producing the prototype as a valuable learning experience for synthesizing the key concepts covered in training. This appears to be due to a combination of compressed project timelines and understanding of roles.

As noted earlier, an additional perceived area of weakness in the process and associated training is in identification and sharing of best practices. Part of the reason for this is that the concepts and tools are new to the majority of the survey respondents. However, improvement is clearly needed in documenting best practices, tips, and tools perhaps in a web site or with job aids.

Conclusions

There is inherent complexity in the process given the many functional groups that are impacted as well as differences in individual skill levels. Organizationally, there is no single group or individual fully accountable to the process.

Product training on Lectora should be specialized to the individual and project at hand in order to ensure transfer of learning and development of skills in compressed time frames. This created a challenge in small group training, particularly in cases where the course template had not been created, requiring a generic approach to various interactions that are encountered with web-based training. Previously, training was conducted one-on-one with a specific course and context for the learner to work within. Separate input provided by one of the training managers that participated in the small group evaluation is to change the training outline to cover three topics: Using Lectora, roles and responsibilities, and standardized templates (these presumably would need to be created.)

It is evident that the purpose and function of the prototype is not understood by all members of the team as the integration of the design, creative strategy, and basic functionality. There is some confusion over who is responsible for creating the prototype, and knowing what resources are required. At least one of the respondents did not feel adequate time was available in the project to complete this task.

Best practices are not being documented and shared on a consistent basis, and obviously vary according to experience level. As a result, participants who are new to the process and product are having the same questions answered over and over again.

Recommendations

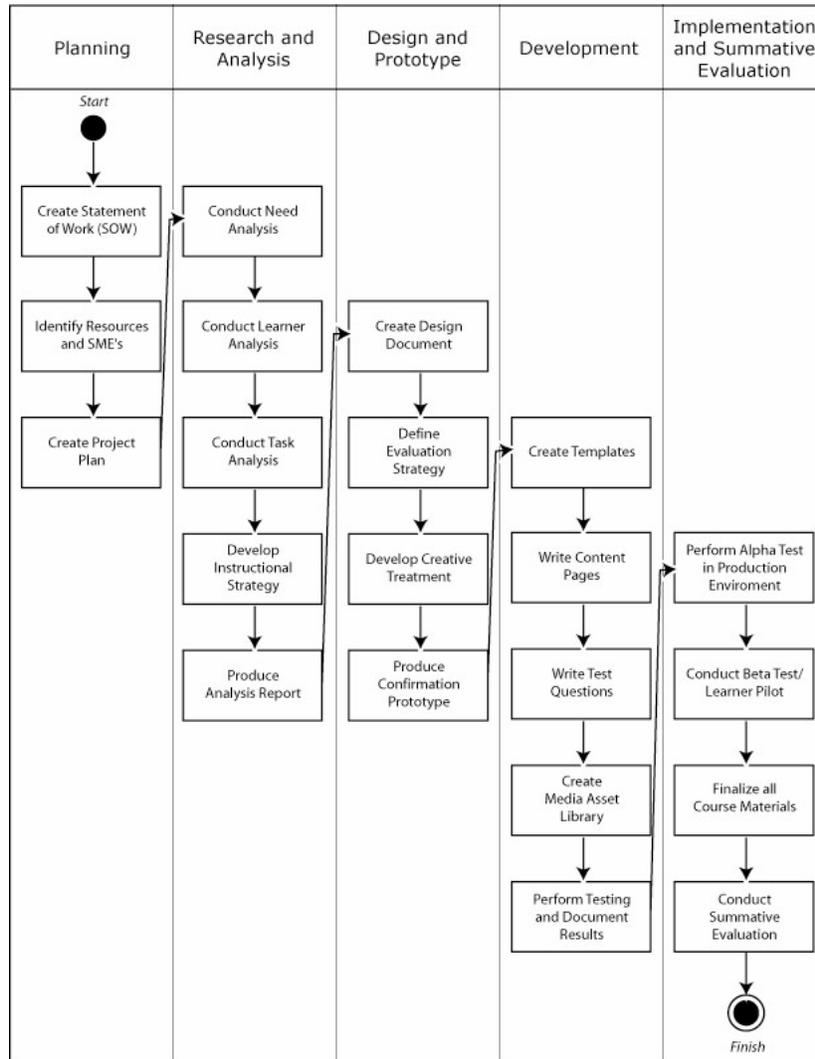
Despite claims otherwise, there is a need for process and product training, in order to use Lectora for creating the web-based training. Rather than small group workshops, a self-paced tutorial covering the process and tool should be developed (as a web-based unit of instruction.) The tutorial should be completed by all participants, followed by a one-on-one training session with a mentor, who also has a stake in the overall success of the program being developed. A very basic tutorial is provided with the software, covering menus and features. In addition, advanced training is needed covering instructional design strategies and interactions for the web using multi-media.

Best practices, job aids, samples, and tools should be organized in some form of online repository to ensure consistency across the organization to reinforce learning and provide a source of performance support tools.

Rolls need to be clearly defined and agreed to at the beginning of every project with responsibility assigned for all key deliverables. These responsibilities must come with appropriate authority, for participants to be effective.

Appendix

WBT Development Process



Workshop Training Outline

- Outline for Writer Training -

Hour 1

Introduction.....	10 min
What is Rapid Prototyping?	
What is Lectora?	
What are the Benefits?	
Workflow.....	20 min
Roles and Responsibilities -- WBT Delivery Model	
Pre-planning	
Course Development	
Publishing	
Collaboration	
Lectora Basics.....	20 min
What is an Object?	
• Media Files	
• Learning Objects	
Content Organization	
• Book/Title	
• Chapters	
• Sections	
• Pages	
Inheritance	
Break	10 min

Hour 2

Working in Lectora.....	40 min
Course Structure	
Adding Pages	
Working with Text	
• Formatting	
• Adding Links	
Working with Graphics	
Adding Pop-ups	
•	Buttons
•	Actions
Reordering Content	
Creating a Table of Contents	
Saving/Version Control.....	10 min
Break	10 min

Hour 3

Creating Questions and Tests	50 min
Question types	
Feedback	
Confirming/Corrective	
Standard/Custom Dialogue Options	
Embedded learning checks	
Quizzes	
Tests	
Interactive Exercises	
Break	10 min

Hour 4

Checking, Publishing, and Editing.....	10 min
Spell Check	
Preview	
Printing	
Handling Pop-ups and Feedback Windows	
Output Options.....	10 min
HTML	
EXE	
LMS (AICC/SCORM)	
Content Management	10 min
Change Control	10 min
Questions	10 min

Content Authoring Process Overview - Using Lectora

Process Steps	Possible Role(s)
Creates an outline or plan (design document) for the content to be created.	Training Manager
Inventories all materials to be included including text, graphics, videos and audio files outside of Lectora; identify sources for Web-based material.	Training Manager, Art Director
Digitizes all materials that need to be converted, then organizes the files using the content outline. Once the materials are organized, the author begins using the tool.	Production Artist, Web Developer
Creates a framework architecture (template) based on the outline that includes chapters, sections and pages using the title wizard or the control panel.	eLearning Architect, Training Manager
Creates navigation buttons using the button wizard or the control panel to import custom artwork created by the author or another source.	eLearning Architect, Web Developer
Begins populating the pages in template with the materials, which includes, graphics, text, videos and audio using either a drag-and-drop technique or the control panel.	Writer
Arranges content page-by-page to accurately create the content as the student will view it.	Writer
Previews pages and functionality of navigation and other elements from time to time using Lectora's preview mode.	Training Manager, eLearning Architect, Writer, Proofing
Adds hyperlinks, animations, roll-overs and interactivity as needed.	Writer, Web Developer
Completes integration of all content.	Web Developer
Creates a test using the test wizard or the control panel.	Writer
Reviews the entire content in the "Publish" mode.	Training Manager, Project Manager, Writer
Edits and modifies the content as necessary.	Training Manager, Writer
Publishes to the Internet, intranet, CD-ROM, DVD-ROM and e-learning standards. Posts to Internet if that is how the course is made available.	Web Developer
Reviews the content using a standard browser.	Training Manager, Project Manager

Learning Curve

Most first-time Lectora users with desktop computer skills can acquire a working knowledge with four hours of training. The skills acquisition model used follows a mentoring approach. Initial mentors will be eLearning Architects and Training Managers.

The role of the mentor is provide the writer with a template for the course, a conceptual overview of the delivery strategy, and a hands-on tutorial that goes through creating various objects in Lectora.

Mentors will be available on an ongoing basis to assist the development team, as are Lectora customer support representatives from Trivantis.

