ABSTRACT

CONVERTING INSTRUCTOR-LED TRAINING TO WEB-BASED TRAINING
AT ATOS ORIGIN
by

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This report describes the internship I completed as part of the requirements for my Master’s in Technical and Scientific Communication at Miami University. During my internship period from November 2006 through February 2007 as an instructional designer for Atos Origin, Inc., I worked on several projects. My main project work involved converting instructor-led training to web-based training, but I also worked as a quality tester for a website and worked on a new project that developed from the web-based training conversion work.
CONVERTING INSTRUCTOR-LED TRAINING TO WEB-BASED TRAINING

AT ATOS ORIGIN

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Chapter 1: Introduction to Atos Origin and My Role in E-Learning

Atos Origin was formed in October 2000 when two companies merged. Atos of France had been a leading European e-services provider, focusing on providing companies with expertise in electronic commerce, customer relationship management, and supply chain management. Royal Philips Electronics of the Netherlands was Europe’s largest electronics company that had an information technology (IT) subsidiary called “Origin.” The merger of Atos and Origin was described as creating “a leading European player in IT services, with worldwide ambitions.” Indeed, in 2002, Atos Origin acquired the United Kingdom and Netherlands businesses of KPMG consulting, and in 2004, acquired SchlumbergerSema, at which point it became the largest European IT services company.

The image below shows a representation of Atos Origin’s organizational structure.

Atos Origin Organizational Structure

Atos Origin’s company headquarters are located in Paris, France; Amsterdam, the Netherlands; and Brussels, Belgium. Its worldwide offices are organized into five regions, which are led by Global Operations in Paris. Region Four includes Atos Origin North America, whose headquarters are located in Houston, Texas and includes the United States, Canada, and Mexico.
Within the United States, the Kenwood office is part of the Great Lakes Region; within Great Lakes, there are two functional areas, Operations Management and Business Consulting. Business Consulting includes the Business Process Lifecycle Management area; and my department, the E-Learning group, is a part of this area.

**The E-Learning Group**

I joined Atos Origin as an hourly E-Learning consultant in June of 2006. I took the place of another consultant who was leaving the company. When I started working, the main project that the E-Learning group had was converting classroom-based training to web-based training (WBT) for Procter & Gamble’s (P&G’s) Financial Services and Solutions (FSS) department. I joined a group consisting of another training development consultant and my direct supervisor, Tom Stahl, who was my project manager and to whom I reported regarding my specific day-to-day activities and projects. Additionally, I had a resource manager, who decided the projects on which I would work. As time passed, this structure became more informal, and project and resource manager activities were both handled by Tom Stahl. My training development colleague, Chris Denman, who is a MTSC graduate, did not have the required time out of the program to act as my mentor, so I worked with Lisa Streit, another MTSC graduate outside of Atos Origin, as my mentor. As my mentor, she helped me address the challenges I faced in my work as a consultant, which was a new experience for me. She, along with Chris Denman, discussed training and writing issues and decisions in my various projects with me, which are described in more detail later in this report.

**E-Learning’s Unique Role**

The E-Learning group has a unique role within Atos Origin. Its resources are often called upon to assist with other groups’ project work as well as to be responsible for bringing in and delivering billable work of their own from external clients. We often took on additional work when it was requested, which served a strategic goal of raising our visibility within the company. As other Atos Origin groups gained an understanding of the various ways the E-Learning group could contribute to projects, these groups began to think of ways to incorporate training into their projects, and our services began to be “sold” along with other groups’ services to external clients.
I encountered several challenges during my tenure as an intern. One significant challenge I faced was the nature of working as a consultant. Instead of steady work in a training department, I had to get used to project-based work that changed frequently and was not planned long-term. The workload was very “feast-or-famine,” in that I would have several very slow work weeks followed by weeks that were extremely busy and had projects with very tight timelines.

Another concept that was new to me as a consultant was thinking about being responsible for work for external clients and being aware that communication with that customer would impact the company and my department. Previously, I had worked in internal training departments, and my “clients” were always other departments within that company. While I always wanted to perform well and make the clients happy, I also had to consider how clients would perceive our work and how to meet their quality and training goals while also meeting their cost expectations.

One reality I had not expected was that, sometimes, cost considerations would force us to forego higher quality to meet an agreed-upon price for development work. We encountered such a situation during my internship tenure; and while none of us wanted to sacrifice ideas we had to make the training a better product, the client had agreed upon a certain price for the course development, and we had to do what we could to meet it in terms of development time and resources. This situation, along with a prototype and the additional project that resulted from it, are all described in greater detail in Chapter 3 of this report.

I also had to adjust to the idea of promoting myself and my skills, as well as the E-Learning group, within Atos Origin and to other departments. As I will describe later, I was hired because the E-Learning group was expecting a large number of courses for a conversion project. This large number of courses did not materialize, and so as an hourly employee, I had to figure out a way to promote my skills to other internal Atos Origin departments so that I would have billable work. If I was idle for too long, I would be laid off, and so I had to let other departments know that I could help on their projects by testing, writing, or editing them. My supervisor helped me raise awareness of my abilities within the company, and this help resulted in additional project work for me: I conducted quality assurance testing, wrote newsletters, and performed editorial work. As a result of these efforts, I was able to broaden my quality review
and test case authoring skills, both of which are valuable to me personally and as an employee of Atos Origin who can offer additional skills as resources to our clients.

My contributions to Atos Origin projects outside of the E-Learning group also helped to increase awareness of our group’s work throughout the company, which was an important way of ensuring future project work for me and for the department. Additional realities of consultancy work required some adjustment for me as well, and these, along with project-specific challenges that I faced, are explained throughout my project work descriptions.

In the next chapter, I discuss an overview of my project work, including project outcomes and time devoted to each task.
Chapter 2: An Overview of Internship Work

During my internship at Atos Origin, I worked on three main projects. These projects included converting PowerPoint-based classroom training to web-based training (WBT), helping to develop training prototypes based upon business process modeling work, and testing a website constructed by other Atos Origin consultants. This chapter provides an overview of each project and the time devoted to each one.

Instructional Design: P&G Instructor-Led Training Conversion

P&G, a main client for Atos Origin, wanted to convert existing instructor-led training courses, consisting of PowerPoint presentations, to WBT for P&G’s Financial Services and Solutions (FSS) department. When I joined Atos Origin, a large number of courses was anticipated; and I was expected to quickly come up to speed on the design methodology used at the company as well as the audience characteristics, goals of the training, and the software used for course development.

Our work on this project was aimed at meeting business needs both for P&G and for Atos Origin. P&G was interested in converting their current training to WBT so that it could be more easily and inexpensively delivered, tracked, and maintained. This goal, however, also included the aim of converting this training as inexpensively as possible. Atos Origin was interested in securing further business from P&G, both for the E-Learning department and for other departments in the company. I was able to assist with this goal by providing quick course-turnaround times and by finding ways of streamlining the development process, such as creating graphics myself when it was quicker to do this than to explain the graphic to another person and by suggesting overall process improvements. Additional information regarding my contributions to obtaining additional work from P&G is described in further detail in Chapter 3.

I was involved in each step of our main work, the course conversion process, so Chris Denman and I were both focused on this work. Courses were allocated by length and complexity at first until I became more comfortable with the process and the client. However, even though I began with shorter courses, since a set process was in place for reviewing, updating, and communicating changes and gaining approval from content owners for the courses, I was able to quickly learn this process and contribute fully to the success of the WBT conversions. The WBT conversion process is described in detail in Chapter Three.
Instructional Design: BPM Training Prototype

Another instructional design project that I worked on during my internship was a business process modeling (BPM) training prototype. This project involved using the output of BPM software, which depicted a process workflow, and developing WBT from it. We developed prototypes to demonstrate what WBT would look like as developed from BPM content and to gain approval from the client for this work. The business need for the client was to obtain WBT for the workflows described in the BPM output. This training mode was preferred by the client for its ease of deployment and maintenance as well as its relatively low cost for development.

The project started during my internship, and I joined it after an initial prototype had been developed by Chris Denman. The client requested another prototype, and I was asked to develop it using the templates and conventions chosen for the first prototype. I developed the second prototype using the BPM output and a Flash simulation of the work process. I also implemented a new way of presenting the procedures involved in the workflow, which was very well received by the client. The prototype I developed was presented at several other client meetings and internal meetings, and these presentations resulted in new project work with other external and internal clients. The additional work continued past my internship period and is currently still underway. Additional information about my activities in this project and the new application that resulted from it are provided in Chapter Three.

Website Testing: EXAIR.com

Another project on which I worked during my internship was quality testing for a website. Another department within Atos Origin was redesigning a website for an external client and did not have a resource who could test the updates. I had previously conducted some quality testing with other internal departments, and so the project employees requested that I assist with site testing. The client’s business needs included updating site design and functionality, adding features, and developing features and training for their employees to be able to update and maintain certain areas of the site.

I joined this project at the outset as its quality tester. I was responsible for developing test plans, implementing the plans in each of several browser versions, reporting and re-testing issues that I found, and eventually developing training job aids and informational documents for use by client employees. The job aids taught client employees to update and maintain certain areas of the website themselves.
This project was completed after my internship tenure, and the client was pleased with the site and the job aids we provided. My contribution to the success of this project included identifying problems and validating their resolution as well as developing the job aids.

**Internship Time**

Converting P&G’s FSS training made up a significant part of my internship period. In fact, it was the reason I was hired by Atos Origin, and it was my top priority. The BPM training prototype was for P&G’s FSS department as well, so this time and the time for WBT development work was billed under the same client code. The BPM work required much less time than the WBT work, representing approximately 25% of the total FSS time. Altogether, my internship hours spent on WBT development and BPM training prototyping for FSS was 456 hours. My quality testing work for the EXAIR website only required 124.75 hours of my internship time. The total internship time was 580.75. The pie chart shown below depicts the relative allocation of my FSS and EXAIR internship hours.

![Internship Time Allocation](image)
Chapter 3: Instructional Design for FSS

My main work during my internship included two instructional design (ID) projects and one project that required website testing. The two ID projects were markedly different both in content and purpose; therefore, each required a different approach. This chapter describes my ID projects in detail, my role in each, and my contribution to their outcomes and success.

P&G Web-Based Training Conversion and Development

Part of the E-Learning group’s work with P&G, and the initial reason for my coming to work for Atos Origin, was to take existing instructor-led training based on PowerPoint content and convert it to WBT. When I began work, the E-Learning group was expecting to be asked to convert a large number of courses in a short period of time, so quickly learning the team’s course development process was important.

The ADDIE Model

Atos Origin uses the ADDIE model, which is made up of five steps: Analyze, Design, Develop, Implement, and Evaluate. This model generally mirrors Paul Anderson’s problem-solving model, which I learned while at Miami University, so I was able to quickly learn the ADDIE process. An overview of the ADDIE model, modified to be specific to this project, and its activities is shown in the following graphic. This graphic also describes my process for converting the training modules.
**Analyze.** As I began my work with Atos Origin, the overall “problem” in my projects was already largely defined. The client had training content that was instructor-led, and wanted the content converted to WBT. The training template and an overall style had already been determined, and I began my work in this environment.

Part of the “analysis” step also involved looking at each course in the conversion project and determining how to change it from instructor-led training to WBT. Content owners would submit a course for conversion through a post to a website called TeamSpace, a P&G intranet site. The post would include existing course content in the form of PowerPoint files, an assessment document if applicable, a cover sheet with overall course details, and any ancillary course materials, such as documents to be launched from the course or audio files. Analysis involved a high-level review of the content, understanding where pieces of the content were missing, and creating an overall structure that would allow interactivity in the content.

**Design.** The Design step encompassed many activities, and they typically consisted of the bulk of the course development timeline. At this stage, the high-level plan for each course would take shape through course review and a grammatical and organizational edit on both the course content and any included assessment that was developed by the content owner. The assessment was supposed to cover the main objectives of the course; another team member reviewed assessments for content and validity. I checked that the course included all required elements,
such as clear and measurable objectives, a description of and adaptation for the target audience, periodic “knowledge check” questions in which content was reviewed after a manageable amount of information had been presented, and a course summary. I designed interactive exercises to enhance the learning, and I identified areas in which I needed additional information or clarification. I was heavily involved with editing and writing material for the courses, and I was also able to identify ancillary materials in the form of job aids and quick-learning guides that could be part of the overall training solution.

I would then develop a new PowerPoint file of the course content, including instructions to developers in an Indian “back office” for building interactivity so the content owner would understand how any interactive elements would work. This back office is described in detail later. I would develop a course worksheet in which I highlighted additional information needs as well as significant changes to the content. This worksheet was intended to capture content owner comments and feedback as well as any requested information. In this process, we made sure the content owner saw the requests or changes and approved them. Chris Denman would then send the new course PowerPoint file, the assessment document, and the worksheet through TeamSpace to the content owner for review and approval. The following images are excerpts from this worksheet.
WBT Content Feedback Worksheet

Course Name: EMEA Credit Tracking
Content Owner: [Redacted]
Date Feedback Sent to Content Owner: [Redacted]

Instructions for using this Worksheet:

1. You will be reviewing the material in your course in the current PowerPoint format prior to the material being converted into the Lectora template. Changes made to your PowerPoint course include the following:
   - Reformatted some of the text for easier readability.
   - Created tables to better highlight the information.
   - Added additional slides with comments in RED for Course and Module Objectives, Knowledge check questions and the Module Summary. On these slides I would like you to add some additional information as noted on the slide.

2. Use this Worksheet to view the graphic or interactivity suggestions I've recommended for this course or answer any questions I might have added in reference to the material. The Worksheet has three columns:
   - Column 1: PowerPoint slide
   - Column 2: My question or suggestion
   - Column 3: A screenshot of proposed graphic or interactivity along with a Sign-Off/Comments section for you

3. Update your PowerPoint presentation, return the Worksheet (with answers to my questions and sign-off on the graphics/interactivity suggestions), and post on the FSS U-Admin Teamspace.

4. If you need my assistance to help you make the changes, please contact me at [Redacted], notify me via the FSS U-Admin Teamspace, or call me on [Redacted].

5. Final edits will be made where appropriate. The reviewed/revised PowerPoint course will be loaded into the Lectora template that is being used for the P&G FSS organization. You will be notified once the course has been converted into Lectora.
<table>
<thead>
<tr>
<th>Questions</th>
<th>Changes/Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slide 20</td>
<td>I want to use this slide.</td>
</tr>
<tr>
<td>See suggested slide at right.</td>
<td></td>
</tr>
<tr>
<td>— SEE updated Powerpoint</td>
<td><em>Yes</em> x <em>No</em> <em>Comments:</em></td>
</tr>
<tr>
<td>Knowledge Check slide for Parking Countries</td>
<td></td>
</tr>
<tr>
<td>Slide 25</td>
<td>I want to use this slide.</td>
</tr>
<tr>
<td>See suggested slide at right.</td>
<td></td>
</tr>
<tr>
<td>Question 2 — Answer A should be Sent for approval via MYSAP — SEE updated Powerpoint</td>
<td><em>Yes</em> x <em>No</em> <em>Comments:</em></td>
</tr>
</tbody>
</table>

**Fi Document Credit Tracking**

The Fi Credit Tracking process is split between:

- [Diagram of process]

The following pages will describe the details and process for each.

**Knowledge Check**

Instructions: Drag the answers to the question.

1. Process starts when buyer pays an expected credit using this type of transaction in SAP (C)
2. No posting document and the credit does not still the invoice to cancel it is sent to the type of Status for investigation. (A)
3. [Diagram or note: 'Status 22' and 'Status 40']
4. When entered, the document is stored as this type of Status and gives a unique number in SAP (C)

Answers:
- A. Status 24
- B. [Diagram or note: 'Status 12']
- C. F-00
- D. Status 40
The content owner would review the interactivity and our suggested changes and interactivity and would provide this information and return the documents to us, which served as approval for the changes and for further course development.

Develop. After I received the approved content documents back from the content owner, I prepared the materials to go to our “back office” for development. Atos Origin typically uses a “back office” in the Atos Origin India as a way to reduce client costs. The back office acts as a cost center, and its employees’ time to develop the training in Lectora, the authoring tool, is charged to the client at a lower rate than would be charged for us, or the “front office,” resources to do the work, shifting a significant amount of course development time to a resource that costs an external client less money. My supervisor, Tom, is also responsible for making sure this back office has sufficient work and that they have work because this office’s salaries and overhead expenses are paid by Atos Origin whether they are doing work or not (T.P. Stahl, personal communication, May 7, 2008). When the back office does not have work, the cost incurred while they do not work reduces the company’s profit margin. Therefore, Tom makes sure we send them work whenever possible.

Preparing courses for the back office work involved removing any content owner comments from the PowerPoint course file, making sure the assessment document contained all the needed information, and gathering all ancillary course materials. I would then create a course folder and page on QuickPlace, a website we used to transfer course materials between the front and back offices. The course folder would eventually include several course pages: the initial course page I created and provided to the back office with course development files and any additional instruction; a second course page, created by the back office when course development was complete and that provided us with the Lectora file and accompanying images; and any additional pages as necessary for the project. For example, if course development had to be put on hold for an update, a new page was created in the QuickPlace course folder with this information. An e-mail would also be sent to the back office resources and copied to the front office staff directing the back office to this information. This procedure served to enhance communication and to provide an additional record of course progress. The back office develops a queue for course development based on our information regarding development priority; if the next course in their queue is placed on hold and the back office has missed the e-mail
notification for any reason, the developers would see this hold status when they went to the course folder to get the development files.

After I posted the materials to the QuickPlace course page, the back office staff would use the materials to build the course in the content authoring tool, Lectora. Using a conversion tool, the back office personnel would convert the PowerPoint content and images into a Lectora template we had developed, and our staff in India would build the interactive elements and assessment. The back office staff would then package the course into a compressed file along with all images and post it to a new page in the course folder within QuickPlace; the staff would send me an e-mail notifying me that the course had been built and was available in QuickPlace.

The Quality Assurance Process. A formal quality assurance (QA) process had not been in place when I joined Atos Origin. However, as the number of courses and team members in E-Learning grew, it became apparent that a formalized process was needed to ensure a consistent, high-quality training product. We developed a QA document that included a checklist of all items that had to be verified as correct according to our established course template before we would provide it to P&G content owners for review and approval. We also added a QA process to the Develop step of our version of the ADDIE model. This document is provided in Appendix A. The document is quite detailed, describing everything from making sure content, images, and interactivity were included; to naming pages according to a specified convention; to running a spell check on the entire course. Chris and I worked together to develop a document with specific enough requirements so that a new E-Learning team member could quickly use the document to start conducting QA reviews without much guidance. This document became somewhat lengthy due to the detail involved in our QA process and could become longer when a lengthy course was involved. Nevertheless, we were also careful to provide space for additional reviewer comments at the end of each section, understanding that there would invariably be items that could not be captured by the checklists we had provided. This QA process, or a version of it, was subsequently implemented in all training work in our department.

Completing the QA for FSS WBT. Once the FSS courses were developed, I would download the Lectora and image files from QuickPlace and would implement this QA review. I would then publish the course to HTML and work through the course with printed copies of the initial course content PowerPoint and assessment files to make sure all content, interactivity, and assessment questions were included, correct, and behaved as intended. After any issues
uncovered by the QA review were addressed, I would re-publish the course to HTML and ensure that any external documents launched from the course were included in this HTML compressed file.

At this point in the Develop step, I would also create any ancillary materials that were identified in the Design step, and I would notify Chris that the course and its materials were ready to be placed in the client’s learning management system (LMS) test folder for review.

**Implement.** I would send the HTML course file to Chris, who would post it to a test folder in TeamSpace and notify the content owner that the course was available for review. The content owner would then review the developed course and provide feedback. If any edits were requested, I would make the changes in the Lectora file, republish the course to HTML, and resend to Chris to post to TeamSpace so that the content owner could again review. Once the course was approved, I would publish the course to the Shareable Content Object Reference Model (SCORM) scoring standard used by P&G with their learning management system (LMS). A SCORM-published course is in its final presentation format, but any later revisions or corrections may still be made in the Lectora file. Later edits would require another QA round, content owner approval, and SCORM re-publish.

After the final approval, Chris would post the SCORM-published course to a live folder in TeamSpace, and the course would then be considered done and would be available to P&G employees as part of their training sequence.

**Evaluate.** During the Evaluate step, clients provide learner- and content-owner feedback, and we evaluate ways to improve the training and implement ongoing maintenance. Our process considers the “final approved” step to be the end point for that version of the content, with no additional changes made until this evaluation step. Clients keep track of any updated or now-incorrect information, and we receive that information as part of this Evaluate step. This step leads back to the Analyze step and begins the next official update cycle for the course.

As my tenure with Atos Origin continued, I became mostly involved in the Analyze, Design, and Develop steps, although work in the Evaluate step also began to emerge as courses moved to that stage of the project life cycle.

**A Sample FSS Course: AA110**

One of the courses I worked on during my internship was AA110: Document Entries, Uploads, and SAP Tips. SAP is a software application whose name stands for Systems,
Applications, and Products for Data Processing. This course focused on methods of posting documents, uploading Excel documents, and SAP tips. The initial content required a great deal of reorganization; connections among topics and procedures were not clear, and upon review, I learned that some topics did not have any supporting information. Also, the original content placed the SAP tips between information on posting and uploading documents, which did not seem logical. Some, but not all, of the SAP tips referred to procedures for posting and uploading information. Because of this focus, it made sense to me to offer this information in its own section at the end of the course, with links on the first page of the section so that users could come to the course to simply revisit specific tip information. The following images include samples of original course content from the content owner’s PowerPoint file, updated course content in a PowerPoint file I created, and the same content from this course in its final Lectora version.
Course Introduction

Course Objectives:
After completing this course, you will be able to:

- Explain procedures for posting documents in SAP
- Explain how to upload Excel documents, including SAP entries that, if manually uploaded, would cause business activities to be delayed because of high volume
- Describe additional SAP use tips

1. Document Entries

- GCF APPROACH IS TO USE:
  - Standard GL posting
  - Fast entry
  - Post with reference (to a standard document or to a sample document)
  - Open held documents
  - EXCEL uploaded

Introduction

There are three methods for entering GCF documents in SAP, including a basic journal entry, fast entry, and posting with references. Incomplete documents can be placed "on hold," which is different than document parking.

Next, each of these procedures is explained in more detail.
1.1 Document Entry Methods

- **Menu path document entry > GL posting (F-02)**: mostly used to move amounts between GL accounts.

- You can choose between:
  - Line by line entry (basic journal entry).
  - GL Fast entry.
  - Post with reference.

- Incomplete documents can be put “on hold”. This is different from document parking. However although the system allow us to do it, it’s not recommended as it can cause Tax report issues or can be payment issues.
1.2 Journal Postings in SAP R/3

- Menu Path from SAP R/3 screen:

Select Accounting ➔ Financial Accounting ➔ General Ledger to go to the General Ledger screen.

Select Document Entry ➔ G/L account posting to go to the Enter G/L Account Posting: Header data screen (Shortcut F02).

The menu path for document entry using journal postings is as follows:

- From the R/3 screen, select Accounting ➔ Financial Accounting ➔ General Ledger

The General Ledger screen opens. From this screen, select:

- Document Entry ➔ G/L account posting (or shortcut F02)

The Enter G/L Account Posting: Header Data screen opens.
1.2 Journal Postings in SAP R/3

On this screen you must complete the following details using the information on the journal front cover:

- **Document Date** – usually the date you are posting the journal
- **Doc. Type** – usually SD, but may also be AB
- **Company Code** – the LE you will post the journal in
- **Posting date** – the date in the period that you are posting to.
- **Period** – the accounting period of the posting date used
- **Currency** – the currency of the amounts in the journal
- **Reference** – a short description of the journal
- **Doc. Header Text** – a short description of the journal
- **PartKy** – the posting key from the first line of the journal (40 Debit, 50 Credit)
- **Account** – the G/L account which you wish to debit/credit (on the first line of the journal sheet).
2. SAP R/3 Tips

The following are included:
- Hotcopy Print
- Variants
- Multiple Values, Ranges and Uploading Lists
- Downloading reports into Excel
- Screen Dumps
- Copying selected data
- Finding values
- Reversing a reversed item and resetting cleared items

General Tips
- General report tree defaults
- Recovering lost SAP sessions
- Text fields
- SourceOne gadget in Intranet
- User defaults
- Shopping and creating sessions
- General command field formats

Introduction
This section contains helpful tips that you can use while using SAP. Tips on the following topics are included:
- Printing hard copies
- Variants
- Multiple values, ranges, and uploading lists
- Downloading reports into Excel
- Screen dumps
- Copying selected data
- Finding values
- Reversing a reversed item and resetting cleared items

Initially, you should continue through the training and view each tip. After completing this training, you can come back at any time to this screen and click a tip to go directly to it for review.

Lectora makes each bullet a link; when users click, they are taken to the first page of the corresponding tip.
Document Entries

Journal Postings

The menu path for document entry using journal postings is as follows:

- From the RG screen, select Accounting > Financial Accounting > General Ledger
- The General Ledger screen opens. From this screen, select
- Document Entry > GL account posting (or hit the F-62)
- The Enter GL Account Posting > Header Data screen (shown below) opens.
My Contributions to the Success of the FSS WBT Project

I was able to contribute to the success of this project work in several ways. I was able to apply the knowledge I had learned from my coursework at Miami University and from previous work experience to write clear information and procedures from the content provided by the content owners, to identify missing or additional helpful information, to improve the processes we used to develop the WBT, and to help develop the QA document and process. The user-centered focus of my coursework also helped me to ensure that the training content was organized and presented clearly and efficiently. This focus also helped me bring a critical eye to my writing, making sure my edits helped make the information clearer to a user unfamiliar with the content. Aside from such day-to-day tasks of the project work, I also stepped in and took over this project completely when additional project work materialized and required my colleagues’ attention; I was able to manage this work and maintain the project on my own for the team.

I had been hired as an hourly employee, with the thought that my work would be project-based. After taking on the additional responsibilities of the FSS project work described above, I became an integral part of the E-Learning group. I was able to help the team complete their project work as it had been defined when I joined them, and I was able to raise awareness of our abilities within Atos Origin, which led directly to additional project work. After my internship, I have continued to receive additional responsibilities in the E-Learning department, including assigning courses for initial review and QA to team members and a sort of informal ownership of the QA process. I believe that a large part of my success in my position was a result of the writing, editing, and design skills I acquired in the MTSC program at Miami University.

The WBT conversion project continued past my internship period and evolved as necessary to meet client needs, and I have continued to work on the project. The QA document we developed for the WBT project was also applied to the BPM training, which is described next.

Business Process Modeling Web-Based Training

Near the end of my internship period, Atos Origin was asked to develop business process models (BPMs) for different P&G internal procedures. The BPM process involves detailing all activities that take place by resources, including software applications and employees, in an identified P&G process, such as receiving and scanning an invoice from a vendor. The product
of the modeling was a kind of flowchart of activities for the procedure that included user and system roles and activities. The E-Learning team was included in the BPM process so that it could create WBT for the resulting models. While I was not initially part of this project, as project work was allocated, I was brought in to develop a second training prototype for a BPM procedure. A sample of the flowchart output provided by the client’s application is provided in Appendix B.

Initially, we were to develop short prototypes of the training to demonstrate what the final training for the procedures could look like and to help secure additional BPM business. Chris Denman developed the first prototype for a procedure to encode consignment invoices in SAP. An additional goal of the demonstration courses was to show that the E-Learning team could develop the training with minimal explanation from content owners. The intent was to determine how long such training development would take and whether the procedure content, BPM, and any ancillary materials provided to Atos Origin contained enough information for us to develop an effective and accurate training course.

**Development According to a Rapid Prototype Process Model**

To meet the dual goals of a faster timeline and minimal contact with the content owners, we implemented a more informal “rapid prototyping” approach. Therefore, this training did not follow the formal structure of the ADDIE model, but rather progressed with all Atos Origin and client resources working together at all stages of development. We received the content as produced by P&G’s software application and used that content along with any additional content materials to develop a draft of the training directly in Lectora, rather than creating a course PowerPoint, having it approved, and then sending the approved files to the back office for development.

The following graphic provides a representation of the rapid prototype development process along with each step’s corresponding ADDIE step.
In this project, I developed a training draft and provided an HTML-published version to the content owner for review to ascertain how successfully I was able to capture the procedure from the initially provided content.

The process I was to document for this WBT was a document scanning procedure. I was able to use the initial consignment prototype to quickly begin to develop the training. I used the template and its conventions designed for the initial consignment demonstration in the scanning course. An example of a convention was the “Course Radar.” The radar consisted of a small image of the step within the BPM workflow at the top right of the page, as shown in the image below.

When the course radar was clicked, a full size image of the workflow was displayed, highlighting the user’s current position within the workflow. Users could click the steps in the workflow to be immediately taken to that step in the process, or they could click a link to return to the location from which they had clicked the radar. This “radar” was included to allow the user to always understand the current activity in the context of the entire workflow.

*Developing WBT Content*

As part of this project, I used the BPM workflow outputs and a Flash simulation of the procedure, called a “viewlet,” to determine what the steps of the process were and how the employee would be interacting with the software system to complete the procedure. While I was
to have minimal contact with content owners to supplement the information that we had received as part of this prototype, I did have to ask for some content clarification, but I was able to get the information I needed in very few e-mails. I also knew that there would be a review by the client, so any information that was not precisely correct would be identified then.

The BPM workflow output gave a very high-level overview of the procedure and one screenshot from the procedure. The scanning procedure was very short and encompassed only a few steps. After I determined the main steps and reviewed the simulation with these defined steps, I realized that the viewlet provided more specific information that presented an opportunity for interactivity. The viewlet provided by the client demonstrated the procedure automatically and was simply meant for the viewer to passively watch. It did not have sound, and so the user would launch the demonstration and watch as the process steps progressed without any user action. Initially, the design plan included presenting the procedure steps and then launching the Flash simulation so that the user could view it. I wanted to create an interactive lesson in which the steps would be presented to the user along with a simulation of the actions needed to complete the procedure. While we did not have the graphics that made up the simulation, I saw that I could use tools in Lectora to approximate the steps involved in the scanning procedure and achieve my goal of using a more realistic activity in the training, thereby helping the user learn the procedure and content more effectively.

I presented my idea to my supervisor and team, provided an estimate of the extra time it would take to complete the interactivity, and indicated why I thought it was a better design decision. With the established timeline and content we had received, our opportunities for “interactive” content was limited to recreating the steps the user would take to complete the procedure. It did get the user more involved in the training, and did allow the user to simulate the steps they would eventually take in the actual application, although the content did not lend itself toward richer interactive elements. We decided that this kind of interactive presentation was a better way to deliver the information and that the extra time and client cost would not outweigh the benefits, so I developed the training content based upon the procedure steps I had created from the original content. I conducted an edit for content and procedural accuracy as well as a quality review to make sure all interactivity worked properly after the course had been published. I met with the rest of my E-Learning team to review the course and identify opportunities for improvement, such as any areas of content that were unclear or any interactive activities that
could be presented in a better or clearer way. I implemented the improvements we decided upon and prepared the course for an upcoming demonstration to the client. I also prepared my part of the presentation, in which I described the instructional design decisions I had made and why these activities provided an enhanced training experience and better learning.

Building the BPM Training

I built the training for BPM instead of having our back office build the course. I was able to capture screen shots from the viewlet and use these to create interactive exercises and provide a more active learning environment for the user. For example, the first step of the scanning process shown in the simulation involved double-clicking an icon on the user’s desktop to launch an application, as shown in the image below.

As shown in the viewlet image, the users are shown an image of a desktop with an icon for Enterprise Scan software and are told that they should click the icon. However, in the viewlet, the user did not click the icon in the viewlet simulation; instead, the user clicked the “Continue” button near the supplemental text to move forward. After clicking the Continue button, the user was told that the software would open and be brought to the next step shown in the simulation, clicking an icon to scan documents. The following image depicts what the user saw at this point in the simulation.
Again, the viewlet did not allow the user to simulate the correct action for the procedure step. The user had to click the Continue button to move forward, which caused the simulation to show the user the dialog box that appears after clicking the icon. The dialog box is shown below.

In my reinterpretation of the simulation, I captured screen shots from the viewlet in order to build an interactive lesson in which the user would actually go through the process required for the scanning procedure. For example, I was able to capture the Enterprise Scan icon used to begin the scan process, as shown on the previous page, as well as subsequent steps’ images from the viewlet and provide them on one Lectora page so the user was able to view a more complete picture of the process. Using Lectora interactivity tools, I was able to recreate the actions the user would execute for the procedure, and in this way the user could actively participate in the process rather than simply watch it unfold on a screen. The following images show the interactivity progression from clicking the Enterprise Scan icon through clicking the Scan icon and receiving the Scanning dialog box.
Step 1: The HP TAP Scan Clerk scans the paper-based invoices using IXOS.

The HP TAP scan clerk uses IXOS EnterpriseScan to scan the paper-based invoices.

1a. Double-click the EnterpriseScan icon to open the IXOS EnterpriseScan software.

Double-click the EnterpriseScan icon now.

1b. Click the Scan icon to scan the documents. You will see a screen indicating that the document is being scanned.

Click the Scan icon now.
As shown in the images, the instruction for the user to click the Next arrow button to continue with the course did not appear until all interactive steps had been carried out on the page. In this way, I could ensure that the user viewed and used all process steps before moving forward to the next steps.

Our presentation to the client contact and content owner was very successful. Both the client contact and content owner agreed with the way I had handled the content and the accuracy with which I had recreated the procedure. The clients were also satisfied with the amount of clarification and additional information we had required to develop the training, and they thought they had additional processes for which the BPM and training would work well. Our team had decided to not include an assessment for the course, but the client asked that we create a short, simple scored assessment and provide it to the user at the end of the course, which I created. We decided to not create knowledge check questions throughout the course, however, because the course was too short to support knowledge checks and an assessment. The client contact and content owner approved my continuing course development with the described changes, and I completed the course.
My contribution to this project was significant. I was able to demonstrate how we could use what was initially very static, sparse content and create dynamic training that employs interactivity to help ensure effective learning.

**Additional Simulation Work**

The completed scanning course was used by several Atos Origin employees in sales presentations and in internal meetings to demonstrate the ways in which the E-Learning group could assist with other projects. One result from an internal demonstration was a new project in which we created electronic prototypes, or ePrototypes, of manufacturing planning and reporting system changes for P&G that had not yet been developed in order to gain consensus among various groups for the way the process would work in the future. P&G had recently acquired Braun and Gillette for their razor and razor blade businesses, and the company was now working with Atos Origin to review all three companies’ manufacturing planning and reporting processes in SAP in order to combine them and create one common manufacturing system. After viewing the scanning course, the Atos Origin business analyst consultants working on the project decided that this would be a good way of presenting the current way each company used SAP to plan and report manufacturing activities as well as the way they would conduct these activities after the consolidation had taken place. This new use of the BPM training prototype led to a very large initiative in which we worked with the Atos Origin consultants who gathered P&G, Braun, and Gillette information regarding the current system processes and detailed the consultants’ understanding of the planned changes to the system in a published Lectora file. The file was used as a questionnaire and information-gathering device, sent to specific client employees who reviewed the described changes and provided feedback regarding whether the changes were accurate as they understood them. They also noted additional information that they felt was important to convey in the change description. We created a survey, called the User Sensing Survey, at the end of the ePrototype, using Lectora’s test feature. This survey gathered overall opinions from the users and created a file, containing the answers, that was e-mailed to designated Atos Origin and P&G employees who were responsible for reviewing the feedback. We then used the information to compile a master list of feedback and updated the ePrototype accordingly. The final product was a published Lectora file that our employees used in client meetings to demonstrate the feedback we had received regarding the change process. The goals of the meeting were to uncover areas that required further discussion and decision-making and to
reach consensus on points that had already been discussed in greater detail. This project will eventually require additional development work for a more accurate prototype of the new processes along with training and job aids for client employees to instruct them on the new processes. I was told at the end of the ePrototype development that I would be working on the training for the new SAP system processes, which was scheduled to take place after my internship was completed.

**The ADDIE Model Versus Rapid Prototyping**

The change from our usual ADDIE approach to the rapid prototype model was due to the nature of these projects. These were tests to create content quickly, and our typical ADDIE-based process was not reasonable for the timelines and nature of the projects. Using a rapid prototype model requires that all team members are experienced instructional designers; designers must understand the ADDIE model and what would normally occur in each step of the process. The rapid prototype model condenses ADDIE steps, so designers must understand the activities being included in the combined steps as well as what activities will be combined in upcoming steps. However, rapid prototyping was met with varying levels of success on the two different projects due to a variety of different project characteristics.

*Rapid Prototyping in the BPM WBT Project.* On the BPM WBT project, I was the lone instructional designer on the project, and I was working with two client content owners to document an established process. In this case, the rapid prototyping worked well because an experienced instructional designer was managing the information development, and I could anticipate upcoming development activities and needs. My design experience also helped me to identify missing content and develop an initial prototype of the training that closely described the procedure. Also, the process was well-defined, so the information I initially received was mostly accurate and up-to-date, and any items that were not accurate in the content were easily identified and provided to me by the content owner. After an initial review of the training in HTML format, the content owners provided missing information and a few slight corrections. In the rapid prototyping for this project, approximately six of our typical process steps were condensed into three steps.

*Rapid Prototyping in the ePrototype Project.* Problems that arose from using the rapid prototype model for the new ePrototype project related to the nature of the content being documented and the makeup of the instructional design team. For this project, we were not
documenting clearly defined procedures; the ePrototypes were actually being used to gain consensus for a process that was yet to be defined as P&G combined their own manufacturing processes and those of the two companies that they had recently acquired. As in the BPM WBT project, the ePrototype project had a very short timeline, and so our development colleagues consisted of two subject matter experts (SMEs) and three instructional design resources who paired up in teams that differed from day to day to document the SAP processes in the ePrototypes in Lectora. All resources were working in a conference room, with two teams working on content and the additional instructional design resource editing the previous day’s work for grammar and consistency. During these meetings, as one team would be working, the other team would overhear a point on which they differed, and development would halt while the SMEs reviewed and agreed upon or corrected content. Additionally, one instructional design team member did not have instructional design or writing experience or experience with the necessary software applications for this project. This resource was not familiar with our processes, the ADDIE model and sound design principles, or the importance of either, and so a sizeable amount of rework resulted both from content that the resource developed that did not adhere to our team’s standards or to the project template as well as from discussions regarding why such standards were important. Instead of accepting the team’s standards, this resource would try to implement different conventions in the ePrototypes, which would cause the team to stop and reiterate the importance of consistency and proper grammar and usage in the project. The result of both problems was that the project timeline was lengthened several times and the entire team, as well as the client, experienced considerable frustration.

**Final Assessment.** Using the rapid prototyping model was successful in both situations to some extent. In the BPM WBT project, the small team and experienced instructional design resource led to a quickly developed training product that met the client’s dual needs of estimating how long a typical project for such content would take and how complete the content would be as it came to the developers. In the ePrototyping project, several project variables combined to make rapid prototyping less successful in keeping to timelines and having clear content to begin with; nevertheless, the client was happy with the end result and got the consensus that was sought.

With a team of experienced instructional designers or writers, I think that the resource issues we faced would have been less pronounced. On the client side, if the content had been
more clearly established, and if the clients had established decision-makers, I believe that we would not have run into some of the timeline and rework issues that plagued the project. Overall, I think in appropriate situations, the rapid prototype development model can be successful.

**Success in ID Work at Atos Origin**

My ID work at Atos Origin was successful not only because of the knowledge I learned in the MTSC program and previous work experiences, but also because of the strong, well-established processes the E-Learning team used. I was also able to alter the process to respond to different kinds of projects, as described with my work on the BPM WBT. In the next chapter, I discuss the nature of Atos Origin and the E-Learning team, as well as our clients, and how the nature of the organizations involved and the project work contributed to challenges during the project and their eventual outcomes.
Chapter 4: Project Challenges and Solutions

I encountered several challenges during each project described in Chapter 3. My learning in the MTSC program, along with previous educational and work experiences, combined to help me address these challenges and develop solutions to them. In this chapter, I describe these challenges, analyze them according to the Information Process Maturity Model (IPMM), and discuss the solutions I helped develop to address them.

Challenges Encountered with Course Content in the FSS WBT Project

A number of issues, originating with both the client and with Atos Origin, emerged as potential problems for the E-Learning department as our projects progressed.

Client Content Issues

Four potential problems were introduced by the content our client provided, including issues with the number of courses we received for review, course length, client concerns about the project budget, and missing course content. Here, each content issue is discussed, along with the way in which it impacted the WBT project and the solutions I and the E-Learning team developed to address the problems.

Number of courses for review. Although our team had initially received 16 courses for review, all of which were approximately 50 or fewer slides of information, we realized that even this small number of slides was poorly organized. Eventually, many courses we received were 65 slides or more, and they were originally developed by subject matter experts who did not have instructional design knowledge. Often, I would find related pieces of information throughout the original course, and had to carefully read through the content several times in order to understand how the information fit together. The length and poor organization required longer front-end review and development time.

Course length. Course length often was an issue because adult attention and task performance is known to degrade after approximately 20 to 30 minutes on a task (Coren, Ward, and Enns, 2004). The guideline within Atos Origin was that an optimum original course length was about 20 minutes of WBT, which translated to approximately 40 PowerPoint slides, depending upon the density of the information provided in the course. A number of courses were much longer than this suggested length, and we suggested that the courses should be broken up into smaller additional courses. This suggestion was not acceptable to our client, so we instead
created multiple sections when reasonable for the longer course content and broke each section up with “knowledge check” review questions in an attempt to make the content manageable and to reinforce learning at reasonable points. We implemented a rule that, generally, we would create approximately four knowledge check questions for every 20 to 25 slides of content.

**Project budgets.** The longer development time required by the front office that resulted from the longer, poorly organized course content resulted in an increased cost per course to P&G. Our client contact asked us to address the higher cost by implementing time constraints in the form of a specified dollar amount per course. This price was promised without regard for whether the course was 30 or 120 slides. I was, of course, used to deadlines, and I understood that sometimes timelines are tight; but for this project, the front office development work hours were broken down as follows:

- Initial grammar and organizational edit: 2 hours
- Interactivity review meeting: 1 hour
- PowerPoint interactivity updates and worksheet development: 1 hour

This timeline could be met for shorter courses, but it was unreasonably short for longer courses. To meet the timeline would mean lower final product quality because we could not devote enough time to detailed review cycles. Our team was not happy with this solution, but we had to make do because these numbers had been quoted to, and accepted by, the client. In order to meet the shortened timeline, we had received the directive that we were not to conduct major redevelopment work on the courses due to the timeline issues described earlier. Therefore, I focused my efforts on content clarity and organization, breaking the content into logical chunks and creating smaller lessons with “knowledge check” breaks consisting of review questions so that the user would be able to better understand and retain the information. Trading quality for shortened contractual hours was very new to me, since this was my first experience as a consultant.

**Missing content.** Additionally, courses had been built as talking points for instructors rather than as standalone instruction. Supporting information was usually missing, and I filled in content as I could from contextual clues. I would also ask for additional information if there was clearly something missing. This set of courses covered accounting processes and procedures, and it was often difficult for me to understand how to best organize the information because of my
lack of in-depth finance or accounting knowledge. As I worked with the courses, I began to gain an understanding of the information and therefore could contribute substantially to the content.

**Client Content Owner Issues**

Content owners also presented three additional potential problems, including language barriers, unresponsiveness, and multiple authors providing conflicting feedback for courses.

**Language barriers.** Many of the content owners were in various global locations of P&G’s offices, and many spoke English as their second language. At times, the meaning of the original course content was very difficult to understand. In such cases, I would make my best effort at presenting the content in standard written English, and would note the areas in which I needed further explanation or where I wanted to make sure I had not misstated the content. Luckily, most content owners were very receptive to my questions and helpful when I had questions regarding the information. If a content owner was not receptive to changes relative to grammar or usage, we would work with the client contact to resolve the issue.

**Unresponsive content owners.** An ongoing challenge related to content owners was the rate at which we received original course content, approvals for reviewed content, and approvals for built courses. One source of the problem was the nature of the content owners’ jobs and the training content’s place in it. While P&G identified content revision for the training courses as an important project, the courses were not a central activity for most content owners. Further, as P&G’s year progressed, other activities took priority, and content for training became less important. As training became less important, all of the content owners’ activities involved in our WBT development process, including providing content, reviewing our suggested updates, and approving the built courses, slowed or stopped altogether. Content owners’ responsiveness had been an ongoing source of frustration for both our team and P&G, because the delays meant less work for us, and we were asked why more courses weren’t completed. As consultants, we did then and must now continually track our course progress and be able to identify where any and all courses are in the development process so we can definitively say where a course has stalled and what needs to happen to complete it. We had several meetings regarding the development process and the number of courses identified as “complete” out of the number of courses P&G had provided us, and we were careful each time to specify steps that could be taken to move the process forward. Ultimately, however, some parts of the process were simply out of our control, and the response from content owners has continued to be an issue past my internship tenure.
Multiple content owner feedback. On several occasions, we encountered courses in which multiple content owners would provide conflicting feedback for a course. In such cases, I compared the feedback, and when I discovered that it conflicted, we contacted the client contact to discuss the situation. We had no indication of which content owner was the “official” decision maker for the course, and so we had to ask our contact to tell us which content owner had the final say for review and approval.

We occasionally encountered courses which had been written by multiple content owners, but which came to us with a single reviewing and approving content owner. This was an easier conflict to manage, because I was the only E-Learning consultant working on this part of the process. I was able to create a more cohesive voice throughout the courses while still maintaining the authors’ point of view.

Atos Origin’s Development Problems

Several problems were also introduced from Atos Origin’s development processes, including quality issues from our back office and changing front office resource responsibilities. Here, our organizational issues are discussed along with the way in which they were addressed.

Back office quality. All courses we received from our back office had numerous problems ranging from missing content to incorrectly behaving interactive elements and assessments that were not set up properly. It became clear that, although the back office resources had multiple job aids describing how to build the courses, these resources were not using consistent methods to build the courses. As described in Chapter 3, we had developed a QA document and process to help identify the problems that existed in the courses we received. We also decided that the back office could use the QA document as a guideline for these resources to understand how we reviewed the courses they built, thereby providing a way for them to improve the quality of the courses that they produced.

As we completed our QA document development, we decided to initiate weekly conference call meetings with our back office staff to introduce the QA document and address ongoing quality issues. The document provided a convenient way to call for these meetings and a somewhat “neutral” way of focusing on quality without creating a negative tone or adversarial relationship. We provided the document to the back office staff before the initial meeting for their review. We also re-sent style guides that had been previously developed and sent so that we could reinforce the styles we needed for this project. The meeting went well, and we felt that our
guidelines and concerns had been effectively communicated. Internally, we decided that we would fix minor issues, but if a problem would require significant rework, it would be returned to the back office with specific instructions regarding the issue. We also decided to develop detailed issue logs to track the number and kinds of problems we were encountering with quality to document the amount of rework required and the accompanying cost to the client so that timelines and any sources of delay and accompanying increased cost could be explained.

Additional complexity was added to the QA process due to techniques the back office used to create interactivity and other elements. An example of this additional complexity is provided by clickable buttons. In Lectora, buttons and rollovers are added using a button tool. Buttons have properties that may be set directly within the button if it is to be used as a button, and a button image may be specified in these properties. Using this technique, all QA checks for that button are completed in one location. Instead of using this technique, the back office would place a graphic on a page, create a transparent button over the image with no defined action properties, and create separate actions added to the button. With this process, additional items are created, each of which must have its properties checked to make sure placement, behavior, layering, and initial visibility are set properly. This technique caused longer QA review times and a much greater chance that an error could be missed.

The meetings seemed to help clarify the communication issues we had with our methods of providing course content to the back office, and while we had several issues to discuss during the first few meetings, these issues lessened and we determined after approximately four conference calls that we would start holding the calls on an “as-needed” basis, only if we identified significant quality issues.

**Changing front-office resources.** We had temporarily implemented a practice in Step 2: Course Review and Update in our process in which I would meet with my E-Learning team colleagues after my initial content review to develop interactivity ideas. This was in part to help a team member develop skills as an interactive designer and was also meant to provide a broader range of ideas to the client. After the client had raised concerns regarding the cost of course development rising due to longer development time and quality problems, our team held discussions to find ways to shorten the process. I suggested that I include simple or “obvious” interactivity ideas in my initial review and edit so that our interactivity meetings would proceed more quickly. For example, if each item in a bulleted list had additional supporting information, I
would include each item as a simple button graphic and call for the user to either click or roll over the graphic to reveal additional information. This strategy was a typical convention we used in such a situation, and so including it in my initial review removed the need for discussion. If I found that I was using a kind of interactivity repeatedly, or if I could not think of an elegant or meaningful way of presenting information, I would flag the information for discussion in the meeting, thereby using our meeting time more effectively. My team members agreed that this procedural change was a good way of shortening our development process, and we incorporated the change.

As the project progressed, we were receiving other project work which required more attention from my E-Learning group colleagues. The interactivity review meetings were halted and my responsibilities first grew to include QA reviews as courses came back from the back office, which had been another colleague’s responsibility. Eventually, I was responsible for all activities for the P&G WBT effort.

**The Process Maturity Model**

Many of the problems described earlier, which I faced in my internship projects, can be understood when viewed from the perspective of the Information Process Maturity Model (IPMM) described by JoAnn Hackos. This model describes six levels of organizational maturity based upon structure, procedures, and management of documentation projects.

**Level Zero: Oblivious**

While Hackos describes the maturity model as officially having five levels, she also includes a level “zero,” that she identifies as an “oblivious” organization. In such an organization, technical or instructional information is typically produced by process or product experts, who do not have instructional design or training experience as part of their jobs. This use of SMEs instead of training or instructional design professionals for training development reflects the opinion of the organization that it is not important to have this information created by people who are dedicated to developing information.

Our client’s organization was at this level, at least in regards to information development on our projects. Their content was written by employees without specialized training, which reflected the attitude that anyone can write training material. Multiple authors’ voices were evident in the content while a consistent style was not. These attitudes led to frustration when we
were attempting to implement our grammar and style edits because we were often instructed to include incorrect grammar and usage as well as poor or inconsistent style and design choices. However, because we were a vendor and continually working for more business, we often had to take a “customer is always right” approach, necessitating a sacrifice in quality.

**Level One: Ad Hoc**

An ad hoc organization is the first officially recognized organization level in the IPMM. At this level, information developers are hired, but they may have little development experience and, therefore, may not fully understand the importance of process. Alternatively, the information developers may be experienced, but the organization may have them reporting to technical teams instead of information development managers. The main difference between Level One and Level Zero organizations is that at Level One, information developers are responsible for creating the information but they have little appreciation or support for doing so.

**Level Two: Rudimentary**

At Level Two, an organization is considered “rudimentary” and is in a transition between Level One and Level Three, where information development is organized and rudimentary. Because of this change state, instability is introduced into the development process. Part of this change involves the organization’s development of a centralized information development department with links to other departments, instead of multiple departments employing information developers. Within this central information development department, design standards and templates are implemented as well as processes that guide activities and are taught to new members of the team. This kind of organization takes a significant amount of time and effort; by Hackos’ estimate, it takes an organization of 20 or so members at least two years to move from Level One to Level Three. In today’s work environment, time pressures make this kind of commitment very difficult, and it is a struggle not to abandon the effort and lapse back into Level 1 activities just to get the work done.

**Level Three: Organized and Repeatable**

At Level Three: Organized and Repeatable, an organization has enough stability in its processes to ensure that a quality project will be delivered on schedule and within budget. At this level, these processes are repeatable and lead to quality results each time. By the time an organization is at Level Three, the process is considered “just the way it is done,” and team
members understand that skipping steps in the process will lead to problems with quality, timeline, budget, or all three. An established process allows team members to take time to look at ways to enhance the information product, and they can begin to take time to look at additional quality assurance procedures. Organizations at this level can also take time to look at management plans that would allow them to reuse or repurpose information to save time.

I believe that Atos Origin’s E-Learning team is at Level Three of the IPMM. We have taken the time to develop detailed information-development processes for training, and our team members understand the importance of each step. The content development process is the first thing we teach to new team members, and it is central to getting new team members working quickly. We also share this process with our clients, and stress the importance of adhering to it for meeting budget or timeline estimates. The process has allowed us to develop the QA document and procedure described earlier, which has led to increased quality and consistency across our projects. Since its development, the QA procedure has become as established as the overall information development process itself. Team members understand the importance of being experts in all processes and standards, especially why they are so important, as well as the importance of understanding our clients’ information needs and the kinds of products we deliver.

**Level Four: Managed and Sustainable**

A managed and sustainable, or Level Four, organization has fully developed standard processes and information architectures. At this level, managers have control over budgets and have to gather information about the cost of individual projects.

Additionally, the team members in a Level Four organization must be aware that effort is needed to maintain this level. For example, strong instructional design processes must be in place to support the information life cycle, and team members must want to “continue to innovate in information design and process re-engineering” to meet changing project goals and needs. Team members in a Level Four organization must also consider the organization as a whole and work with stakeholders in the organization to create a collaborative partnership with other teams in the organization.

At the time of my internship, my department was well-established in Level Three. While my team exhibited some characteristics of a Level Four organization, I believe that the larger Atos Origin organization would have to understand and support the effort and time it would take to implement the practices necessary of all team members in order for us to move to Level Four.
For example, as described earlier, our team has a well-established information development process, and we emphasize the importance of following the process to both internal Atos Origin colleagues and to those we work with in our client organization. We do modify the process as needed to meet changing project and client goals, and such innovation is an important component of a Level Four organization as described by Hackos. As I continue to work at Atos Origin, I see additional ways in which our department is growing in the IPMM, including some business analysis activities and some opportunities for growth, as evidenced by my additional responsibilities.

It may not be readily apparent as to why it would be desirable for an organization to put the time and effort into moving up in the IPMM. Our department is very successful in converting P&G’s training and the client is happy with our work, and so it may seem like this kind of effort is not needed. While our department is successful, however, by looking at our place in Hackos’ IPMM and the next level into which we would move, it becomes apparent that we can become even more successful in our current projects and perhaps secure additional work by moving up in this model.

For example, while our processes are well-developed, they are implemented with some variability. This variability leads to less efficient project work through re-work or time spent discussing how the process was not followed rather than continuing with additional project work. Our supervisor, Tom, is always stressing the importance of “driving time and cost out of the process,” which translates in our world as vendors into lower project cost and happier clients. By following the processes that Hackos outlines as being indicative of a Level Four organization, employees and the organization understand the importance of adhering to the well-established development processes. If the employees then implement the processes and strive to stick to them, such inefficiencies can be driven out of the development process, leading to a lower cost for the project to the client. The lower project cost, along with a training product that the client feels is of good quality, leads to a happy client and additional work. One can see the tangible benefits that can result from a focus on well-defined and followed processes as described by Hackos at Level Four of the IPMM.

**Level Five: Optimizing**

According to Hackos, a Level Five organization may look, on its surface, similar to a Level One organization. Team members work independently, but this kind of independent work
is within a context. While team members work independently, each member works in user
groups to understand a customer’s needs and developing the most useful content for that
customer. All team members understand the importance of using standards and templates and the
effort that went into developing such tools. The organization itself encourages innovation and
improvement in its processes and recognizes the importance of allocating time and effort toward
new ideas. While the E-Learning department at Atos Origin is at a Level Three of the IPMM in
my opinion, it does show some characteristics of a Level Five organization. More established
team members are able to work very independently and become experts on specific projects, and
these team members do feel comfortable trying or suggesting more innovative ideas than are
typically implemented. Our supervisor is currently moving each of the established team
members, including myself, into more managerial-type roles with specific skill sets so that our
growing team operates more smoothly and efficiently.

Understanding Development Issues In An IPMM Context

I believe that the problems I encountered on projects during my internship period can be
understood when considering them in the context of the IPMM model.

Client Issues from an IPMM Perspective

As discussed earlier, P&G has SMEs develop their training content. While
knowledgeable about the content, the content owners we worked with had not been trained in
instructional design, and it was apparent in the content and content owner problems we
developed, including problems with course length, grammar changes, and increased project
costs.

Course length. Although we had designed a short WBT to provide information regarding
guidelines and appropriate content for web-delivered material, the content owners continued to
send us extremely long courses and were not receptive to the idea of breaking the courses up into
multiple sessions. Some courses were as long as 245 slides. Also, the varying quality of the
initial content meant that estimates of the time it would take to review and build a course could
be very different, even for courses of the same length.

Grammar changes. Many of the problems with the timeline were also attributable to our
client content owners not having writing or training knowledge and not adhering to Atos Origin’s
development process, further highlighting the lack of understanding of how such processes can
lead to projects that meet deadlines and budgets. An example of the impact of lack of writing knowledge on the WBT project was a content owner who insisted on us making improper grammar changes in the content. We had been told by our client contact that we owned the grammar edits, but this content owner insisted on having subjects and verbs that did not agree as well as other incorrect grammar and usage requests. As described in the IPMM, P&G was acting as a Level 0, ad hoc, organization, using an employee not trained in writing to review and request changes in the training content.

**Increased project costs.** The client’s lack of understanding for the importance of process also impacted their cost for courses. For example, our process calls for a single WBT review in which the content owner receives the QAed course and identifies any problems or changes in content that have arisen since the content review and approval in PowerPoint. A content owner began to send additional review cycles; it was not uncommon for this content owner to send three or four separate update requests, each requiring additional development time and money. While we addressed the issue in meetings with the content owner and we received assurances that P&G’s content owners would adhere to the process so that their costs would not increase, this content owner continually demanded additional changes and multiple updates. The content owner also asked that we make any QA fixes instead of sending them to our back office according to our practice so that this owner’s courses would be completed faster. We explained that we could not change our process on this content owner’s request, and that the owner’s supervisor would have to approve the change in process because it would mean us doing the work at three times the cost of the back office. We were finally told by our supervisor to just do the work in the front office to get through the courses, because it was clear that the content owner was not going to follow the established process, even with direction from a supervisor to do so.

**Atos Origin Issues from an IPMM Perspective**

Atos Origin’s various resources and departments are at different levels of the IPMM, resulting in different approaches and viewpoints when it comes to training development.

**Back office.** While I describe Atos Origin as being at Level Three of the IPMM, its back office is at a Level One or a Level Two. Atos Origin had decided to go with a back-office model to allow for lower price quotes to customers, which builds extra time into the development cycle and which creates a situation in which we have no control over which personnel resources are
used to build the courses. We later learned that the back office employees were not dedicated to our project, and that they viewed the work we required of them as of low importance, because they were software engineers by training. The employees were rotated into and out of this work, and we were told that they viewed our course building as menial and administrative, so they gave it their lowest priority and attended to it when they had no other work to do.

In terms of the IPMM, both of these situations reflect the attitude that anyone can do such work, and that it is not important to have resources with the training to do such development work. Although we could not do much to address issues related to the content that came to us, we could address the problems with our back office. Once we learned of this situation, we worked with the back office so that we did have dedicated employee resources with appropriate experience for such work. This insistence that we have employees dedicated to our work and who understood the importance of quality when building a series of courses reflects our department’s level in the IPMM. Our team members understand that certain skills are required to turn information into training, and the knowledge that our back office development resources were not dedicated to, or even interested in, making our courses to a standard of quality, helped us to understand why our attempts to communicate our standards did not seem to lead to better products.

**Front office.** The E-Learning department team members’ response to the problems encountered in the WBT project reflects the team’s position at Level Three in the IPMM. The importance of a well-established and refined process was clear in how we created solutions to the various issues. For example, when increased development time led to increased client cost, the development process was examined and we determined how some of the steps could be altered to meet new timelines. When we realized that we were getting courses from our back office with numerous development mistakes, we developed a thorough QA process that not only served to help us identify mistakes in the courses, but also helped the back office understand how we were reviewing the courses and the criteria we used to identify mistakes. This process served to improve the quality of the courses we provided our customer and helped to further streamline the development process.

**Other Atos Origin viewpoints.** On a larger organizational level, Atos Origin does not quite fall into the Level Three IPMM category because of pressure to send content review work to the back office. As discussed, the back office does not employ resources trained in
instructional design, and the E-Learning department is continually asked to find a way to send content review responsibilities to these resources in an effort to save more money for the client. As with the back office, attempts to send content review work to resources not prepared to appropriately address the content issues described earlier reflects an attitude that anyone can design training and a lack of understanding of the importance of specialized knowledge of training design and methods.

In Conclusion

Since completing my internship at Atos Origin, I have continued to work there and have gradually been given more responsibilities. The learning I obtained from the MTSC program has helped me develop my writing and instructional design skills, and in turn, I have started to manage my projects more independently. Additionally, our department has begun to grow and hire additional people, and I have had some responsibility to orient and train these new resources as to our design practices, styles, and processes.

The management and organizational skills I learned in the MTSC program have already been invaluable to me as I have dealt with some difficult situations in this position, but I was able to remain productive and even work with all sides in disagreements to come to a conclusion that worked best for all involved. For example, the user-centered principles the MTSC program instilled in my design approach has served me very well when designing WBT from instructor-led materials. The MTSC coursework always stressed the importance of considering the user in all design activities, and I was able to be an advocate for the user, both to my internal colleagues and to the clients when I have been asked to explain my design decisions. An additional example is the sound writing and editing skills I gained in the MTSC program, which have allowed me to improve the clarity and effectiveness of the training content we had been asked to convert. My supervisor has noted this, which again provides me with some experience that has already led to increased development and project management responsibilities, and I hope will eventually lead to more formal resource management responsibilities.
Reference List


Appendix A: The Quality Assurance Document

The QA document I helped develop and used in my WBT testing is provided here. I developed this document and the QA process during my internship tenure, and I continue to update both the document and process as needed.
### 1. Course Variables and Introduction

<table>
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</tr>
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<td>MedalType</td>
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<td></td>
</tr>
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<td>TotalPagesManual</td>
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<td></td>
</tr>
<tr>
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<td>RequiredScore</td>
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<td></td>
</tr>
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<td></td>
</tr>
<tr>
<td>1f.</td>
<td>All navigation, menu, print, and exit buttons, work properly</td>
<td>☐ Yes ☐ No</td>
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Additional comments (include test item number with comment): __________________________________________
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</tr>
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<td>![ ] No</td>
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<td>![ ] No</td>
</tr>
<tr>
<td>2e.</td>
<td>Page name corresponds to the page name provided in course PowerPoint</td>
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<td>![ ] No</td>
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<td>First body text box placed at 93, 106 and left aligned with zero margin <em>(except Getting Started, Main Menu, and Assessment Complete)</em></td>
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<td>2i.</td>
<td>Checkmark images beside Knowledge Check page titles are in the same spot (247, 76) for all questions</td>
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<td>![ ] No</td>
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<tr>
<td>2j.</td>
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<td>![ ] No</td>
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<tr>
<td>2k.</td>
<td>If a popup window has multiple pages, the initial pages have a next button and instructions that tell the user to click the next button to continue</td>
<td>![ ] Yes</td>
<td>![ ] No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>![ ] n/a</td>
<td></td>
</tr>
<tr>
<td>2l.</td>
<td>If a popup window has multiple pages, the last page in the sequence has a back button and a close button and instructions that tell the user to click the close button to close the window</td>
<td>![ ] Yes</td>
<td>![ ] No</td>
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<tr>
<td></td>
<td></td>
<td>![ ] n/a</td>
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<tr>
<td>2m.</td>
<td>Rollover buttons have a normal state image and a rollover (RO) image associated with them, unless otherwise specified in PPT</td>
<td>![ ] Yes</td>
<td>![ ] No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>![ ] n/a</td>
<td></td>
</tr>
<tr>
<td>2n.</td>
<td>Popup windows <strong>do not</strong> have an address bar; windows <strong>do not</strong> have scrollbars <strong>unless</strong> the content requires scrolling</td>
<td>![ ] Yes</td>
<td>![ ] No</td>
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Additional comments (include test item number with comment): ____________________________________________

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### 3. Naming Conventions

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<td>Introduction and Lessons: Pages named “[Course Name] Page #,” matching number that will display at the bottom of the course window</td>
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<td>✗ No</td>
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<tr>
<td>3d.</td>
<td>Course Complete: Pages named “[Course Name] Course Summary” for summary and “[Course Name] Course Complete” for last counted page</td>
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<td>✗ No</td>
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<tr>
<td>3f.</td>
<td>Assessment Introduction: Page named “[Course Name] Assessment Introduction”</td>
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<td>✗ No</td>
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<tr>
<td>3g.</td>
<td>Course Assessment: Pages named “[Course Name] Assessment Question #” corresponding to question number in doc</td>
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<td>✗ No</td>
</tr>
<tr>
<td>3h.</td>
<td>Assessment Complete: Page named “[Course Name] Assessment Complete”</td>
<td>✗ Yes</td>
<td>✗ No</td>
</tr>
<tr>
<td>3i.</td>
<td>Popup pages named with the title listed at the top of the page, if a title is present</td>
<td>✗ Yes</td>
<td>✗ No</td>
</tr>
</tbody>
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Additional comments (include test item number with comment): __________________________________
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4. Images, Buttons, and Launched Documents

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<th>Item</th>
<th>Image Settings:</th>
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<tr>
<td>4a.</td>
<td>“Use empty ALT tag for HTML publish” checkbox is checked in the Image Properties: General tab, unless the course PowerPoint specifies that the ALT tag <strong>not</strong> be checked</td>
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</tr>
<tr>
<td>4b.</td>
<td>If supplemental information being is being provided in the ALT tag, the information is spelled correctly and is correct as specified in the course PowerPoint</td>
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<td>If supplemental information is for an image under a transparent button, the ALT tag information is provided by the button</td>
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</table>

**Button/transparent button settings:**

| 4d.  | Unless used in a situation as described above, buttons have empty ALT tags in the Image Properties: General tab | ☐ Yes ☐ No ☐ n/a |                  |
| 4e.  | Transparent buttons are accurately placed over clickable/action areas and covering the entire clickable/action area | ☐ Yes ☐ No ☐ n/a |                  |

**Launching documents:**

| 4f.  | Documents are launched using “Go to” “Web address” in properties; “web address” field has full document name with extension | ☐ Yes ☐ No |                  |

Additional comments (include test item number with comment): __________________________________
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## HTML-publish the file and continue with QA

5. Page Behavior

### Obstructions:

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<td>No page element is overlapping any part of the background or navigation buttons</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>☐ Yes</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>☐ No</td>
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<tr>
<td>5b.</td>
<td>No page element is overlapping any other page element unless specified in the course PowerPoint</td>
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<td></td>
</tr>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>5c.</td>
<td>Rollover information does not obstruct or overlap the item used to generate the rollover</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>☐ Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>☐ No</td>
<td></td>
<td></td>
</tr>
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<td>5d.</td>
<td>Rollover information is not obstructing other objects on the page unless there is not sufficient white space available</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>☐ No</td>
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<tr>
<td>5e.</td>
<td>Popup windows open over the original course window but nothing within the popup window is cropped or obstructed</td>
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### Behaviors:

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**If the correct action does not take place:**

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</tr>
<tr>
<td></td>
<td>☐ No</td>
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<table>
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<table>
<thead>
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<table>
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<tr>
<td></td>
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<tr>
<td></td>
<td>☐ No</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>☐ n/a</td>
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</tbody>
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### External files:

<table>
<thead>
<tr>
<th>Item</th>
<th>Documents to be launched from the course are stored in the HTML folder</th>
<th>Correct</th>
<th>Pages affected</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>☐ Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>☐ No</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>☐ n/a</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments (include test item with comment):
6. Knowledge Checks (does **not** include Assessment)

<table>
<thead>
<tr>
<th>Item</th>
<th>Setting</th>
<th>Correct</th>
<th>Pages affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>6a.</td>
<td>Feedback generated by submitting correct answers accurate and spelled correctly</td>
<td>☐ Yes</td>
<td>☐ No</td>
</tr>
<tr>
<td>6b.</td>
<td>Feedback generated by submitting incorrect answers accurate and spelled correctly</td>
<td>☐ Yes</td>
<td>☐ No</td>
</tr>
</tbody>
</table>

Additional comments (include test item number with comment):

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### 7. Assessment

<table>
<thead>
<tr>
<th>Item</th>
<th>Settings</th>
<th>Correct</th>
<th>Pages affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>7a.</td>
<td>Number of questions asked in the assessment correct as specified in the assessment document</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td>7b.</td>
<td>No feedback provided after answering each question</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td>7c.</td>
<td>Take the assessment and answer every question correctly and see if the results are 100% (if so, all questions are set up correctly; only works with random.)</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td>7d.</td>
<td>Complete the assessment with exactly the minimum passing score and see if the correct message appears</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td>7e.</td>
<td>In Assessment Complete, the correct passing score is provided in the “Display passed text” action’s Condition tab</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td>7f.</td>
<td>In Assessment Complete, the correct passing score is provided in the “Display failed text” action’s Condition tab</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td>7g.</td>
<td>Take the assessment and get enough wrong to receive less than passing score; check for appropriate score and fail msg.</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td>7h.</td>
<td>Assessment score displayed correctly on the assessment completion page</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td>7i.</td>
<td>The correct pass/fail message is displayed according to the test condition (all correct/some incorrect)</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td>7j.</td>
<td>The correct passing score is displayed in the first paragraph on the assessment complete page</td>
<td>☐ Yes ☐ No</td>
<td></td>
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</tbody>
</table>

### Assessment Properties

<table>
<thead>
<tr>
<th></th>
<th>Correct</th>
<th>Pages affected</th>
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</thead>
<tbody>
<tr>
<td>7k. Content tab: Ensure student answers all questions checkbox selected</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td>7l. Random selection checkbox selected</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td>7m. Choose field for random selection: number of pages asked in assessment as specified in the assessment document</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td>7n. Results tab: Of top three checkboxes, only the “Grade the Test” checkbox is selected</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td>7o. Lowest passing score set to the passing score specified in the assessment document</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
</tbody>
</table>

Additional comments (include test item number with comment): ________________________________________________
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Additional Comments or Issues

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Appendix B: Example of BPM Workflow

A process workflow provided by the client for our BPM training project is provided here.