

DIGITAL SIGNAGE PROPOSAL

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Improving Performance

This project involves discovering how to successfully implement a digital signage display system at UNCW. The goal is to prepare UNCW employees, through face-to-face training, to utilize and maintain a digital signage display system. This has been done by completing an analysis, including a survey, of the current digital signage display system at UNCW. The results of this analysis provided the information needed to generate the training procedures for UNCW to have an effective DSDS.

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Digital Signage Proposal

IMPROVING PERFORMANCE

EXECUTIVE SUMMARY

The University of North Carolina Wilmington is considering the deployment an institutional digital signage system campus wide. This will replace many of the analog bulletin boards and posters around the university. Other departments have already initiated their own digital signage solutions. For most departments, the administrative support staff are left with the responsibility to maintain these informational outlets. This requires knowledge of graphic design, data entry, data collection, and printing; fields they are not usually trained in. Further, their managers are not always skilled in understanding time requirements surrounding these outlets, and as a result, staff time is frequently mismanaged. The mixed use of dozens of different digital products and analog formats along with staff training required for some of the turn-key systems, (which have proven to not be very turn-key) has caused a large scale performance issue where thousands of dollars are wasted annually. This has been identified as a problem by campus leadership and the university has long sought to correct this issue. Of the one hundred and eight displays throughout the super-system, only 36% of them are being operated correctly while the expectation is that 100% will be functioning correctly. This leaves a performance gap of 64% from actual to ideal. In addition, it was discovered during interviews and observations that 75% of the departments lack management and designated staff responsibility with regards to the digital signage system, an apparent factor influencing the performance gap.

The administration of UNCW is led by the office of the University Chancellor, who oversees the ten separate divisions. Academic Affairs (system), led by the Provost, is comprised of seven wholly separate entities (sub-systems) and subsidiary departments. These entities consist of Information Technology Systems, Public Service and Continuing Studies, College of Arts and Sciences, Cameron School of Business, Watson School of Education, College of Health and Human Services, and Graduate School and Research. These separate arms of Academic Affairs have their own management structures, led by deans or directors.

Academic Affairs, as a division, invested in approximately half of the one hundred and eight public television displays that are to feature promotional and informational material through the deployed digital signage display system, the remaining purchased by subsidiary units throughout the super system.

While the super system is affected by the digital signage display system, the boundaries of our system (see Figure 1) include the following: the Media Productions unit within the department of Public Service and Continuing Studies, Information Technology Systems department, and the individual entities within the Academic Affairs division as well as subsidiary departments. Within these individual entities or units are six different elements that are the key to making a digital signage system work. The elements are: system training, funding, content management/technical support, instructional design/development, and content creation.

A thorough front end analysis of the operating system was completed through collection of research data, which revealed that proper resources were not being allocated to effectively support the digital signage display system that was adopted throughout the organization. This lack of support was identified as the absence of a centralized management structure, the absence of policies, rules, and procedures governing the

Figure 1

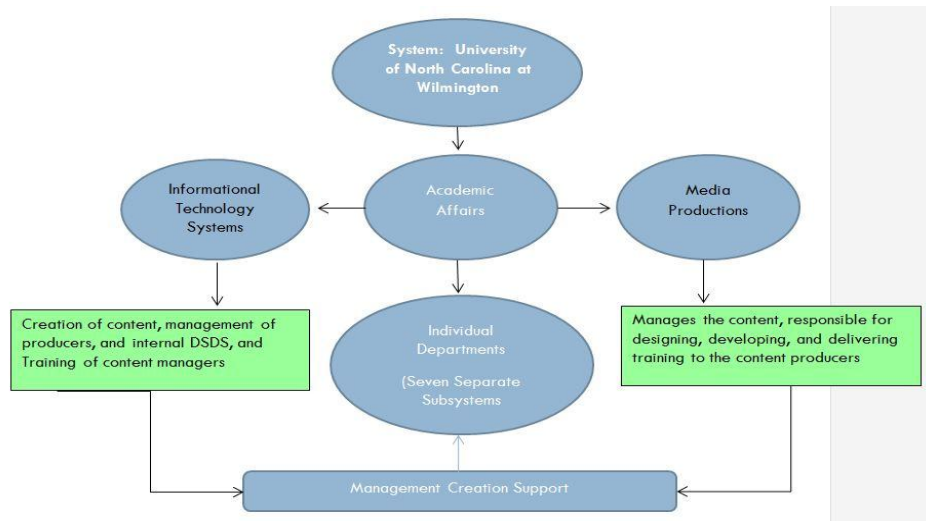


Figure 1: Digital signage system analysis

digital signage system, and knowledge and skill level deficiencies at the managerial and contributor level. Several solutions were analyzed, taking into consideration available and required resources. It was determined after analysis that a package of solutions be adopted and implemented to solve the issues inherent with the digital signage display system in its present state. These solutions include the formation of a leadership committee to govern and oversee the digital signage display system campus wide, thus providing a centralized management structure and the creation and implementation of a managerial training program.

This package of solutions, properly deployed would be of great benefit to UNCW's digital signage in achieving the goal of providing current and relevant information to all stakeholders university wide. Leadership and management throughout the system will be working in a collaborative manner, using a centralized DSDS that promotes current and relevant information throughout the super system. These solutions should solve the issues currently plaguing the DSDS and will allow for it to fulfill its intended goals, while providing a valuable service to UNCW at large. These solutions were chosen due to the goals and resource availability within the system. Cost and personnel availability were identified as the significant variables in the selection of solutions, where budgetary considerations for the project are estimated to be just over \$12,000.

The following proposal will serve as a road map for the system's implementation of the recommended training solution, with the expectation that a formal management-training program will effectively reduce the stated 64% performance gap. The proposal includes a textual outline of the look and feel of the products to be delivered and a phase by phase synopsis of tasks to be accomplished and team member responsibilities.

PROBLEM STATEMENT

An open operating system such as this is susceptible to many variables that affect its ability to function at an optimal level. Organizational structure, the environment, and human outputs all influence the fluctuations in optimal performance. Academic Affairs adopted a digital signage display system (DSDS) to be used across campus as a mode of communication. The purpose of putting the system in place was to improve the communication and promotional efforts of subordinate departments by allowing them to deliver information in

bulletin format to public computer or television displays. However, management and oversight of the digital signage display system is occurring in a decentralized fashion. In an optimum state, 100% of the public monitors would be functioning correctly while displaying current information that promotes campus and departmental programs. "Correct" displays are defined as a multiple zone, multimedia capable format that simultaneously displays current campus and individual departmental information, important/emergency notifications, and other organizationally relevant information that is updated with determined frequency.

An informal survey conducted in 2011 revealed that 76 of 108 identified displays were being incorrectly utilized. Incorrect use of the digital signage display system is described as the displaying of dated content, broadcast of single zone displays such as glorified PowerPoint's and slideshow, powered off, tuned to general cable television channels, or otherwise were not being operated in a manner typical of a proper digital signage display system. The 64% rate of which the digital signage displays are being utilized incorrectly has led to wasted resources.

Data analysis revealed that resources for generating content for the digital signage systems within the system are being incorrectly allocated by the entities/units who purchased them. The entity/unit who purchased the digital signage display system is also responsible for providing managerial oversight and resource allocation for their units. However, due to the decentralized nature in which the system was initially implemented, system responsibility is ill defined within many departments, both in leadership and person of responsibility, as well as in budgetary considerations. In an optimum state, 100% of the monitors will be utilized effectively allowing individual departments to promote their programs and communicate important information across the entire UNCW community.

PROPOSED SOLUTION AND RATIONALE

A complete front end analysis of the system was conducted and the results of the data collected indicate that Academic Affairs should adopt a combination of solutions. The analysts recommend the adoption of a centralized signage model, the formation of a leadership committee for the digital signage display system, and a management and contributor training program. These are all new endeavors, as none of the above currently exists within the system, with the exception of contributor training, of which the current program in place is ineffectual at best. Individual entities/units within the Academic Affairs division is either not utilizing the DSDS or not using it effectively as it was intended. This has resulted in lost time and lack of information to the students, faculty, and staff of UNCW. The goal is for the training to inform the employees in charge of the DSDS how to properly manage, maintain, create, and update content onto the digital displays. The adoption and successful implementation of the proposed solutions will effectively assist the system's goal in reaching an optimum state for their digital signage display systems.

Training the Trainer

Management training will target the individuals charged with managing and overseeing the digital signage display system within their individual entities/units. This training will not only include management and usage of the digital signage display system, but also instruction in how to train their subordinates in content production and uploading procedures. The train-the-trainer program will consist of formal instructor led training, job aids, and a community Wiki. In order to be cost effective, the formal training will consist of one, two and a half hour instructor led workshop session facilitated by the ITS designated staff trainer with a follow up "teaching session" with the DSDS SME. During this "session" they will be required to apply what they learned during the workshop and "teach" the digital signage display system subject matter expert (DSDS

SME) how to utilize the DSDS. The DSDS SME's role during this is of a learner, but will also provide corrective feedback and mentoring where needed.

The training session itself will consist of four lessons that are focused on an introductory overview and intermediate usage of the DSDS with the following objectives:

- Understand what a digital signage system is and general digital signage concepts, practices, vocabulary and principles.
- Demonstrate how to access and navigate the digital signage system
- Demonstrate how to perform basic administrative functions
- Demonstrate how to create and publish bulletins and
- Demonstrate how to manage bulletins

and is broken down as follows:

Lesson 1 - Discussion of Digital Signage Systems

In this section, approximately thirty minutes is spent giving a general overview of digital signage systems, methodologies, processes and practices.

- Overview of digital signage - digital signage is defined and the purpose of it is explained
- Various types of digital signage are shown - trainees are given brief exposure to various types of digital signage systems
- Nomenclature is explained - the terms resolution, high definition, zones, client/server, player, streaming, cache, template, network, cable television, player, and display are briefly explained
- An overview of "Zoned" digital signage is given - the UNCW campus operates a zoned system

Lesson 2 - Getting Acquainted With System and Administrative Functions

In this portion of the training, users are taught how to browse the site and log in.

- Overview of client system requirements - Users are given a detailed list of what client systems and technology is necessary for the use of the signage product. Given the diverse range of operating systems, browsers, media plugins, and so on, this is an essential step to help the user understand how the software might interact with their particular environment.
- Accessing the system - Users are trained how to navigate to the site and log in. The two main sections; the administrative section and the media design section, are given a brief overview.
- Using the administrative section - The administrative section of the system is explained in more detail. Here they will learn to change their password, username, email address, setup alerts, and perform other administrative functions necessary for their account management.
- Navigating to the media creation and management section - Users are shown how to navigate to the media design section from the landing page and the

Lesson 3 - Creating and Publishing a Bulletin

- Starting a slide - Users are shown how to access the slide creation and editing section of the system
- Choosing a template - The term template is explained in more detail. Users are shown how to use the preview features for the software to choose a template for their bulletin
- Filling in information - users are shown how to fill out the template. Users are also shown features that allow them to adjust template properties, preview their bulletin, check their spelling, and upload photos and video.
- Scheduling and publishing - Trainees are shown how to use the scheduling features of the software to manage the playback of their bulletin and conclude the publishing process

Lesson 4 - Managing Bulletins

Once students have successfully published a bulletin they are shown how to use the management section of the software to control their publications.

- Accessing the management section - students are shown how to access the portion of the software used to edit and manage the bulletins
- Navigating the management section - students are shown how to navigate through various views of the software and to sort find bulletins
- Editing an existing bulletin - trainees are shown how to open an existing slide in the creation and editing section discussed in the previous module.

During the training, job aids will provide the learners with detailed instructions for how to utilize the DSDS to the fullest. The job aids will include examples of effective digital signage display systems. These will also act as quick reference guides for trainees during their normal course of work in regards to digital content procedures. The community Wiki will be the home for electronic versions of all training materials, including PowerPoints and Video tutorials, as well as have a discussion forum so that members may learn from and support each other. The combination of face- to -face training ,job aids, and a community Wiki will help the managers gain the requisite knowledge needed in how to use the digital signage display system successfully and efficiently. With the new knowledge the managers will be more satisfied with their end product when using the DSDS.

Adopting a centralized signage model

Since implementation, there have been no concerted or collaborative efforts in the use of the digital signage display system. By adopting a centralized signage model, both the super system and system alike will benefit. Each touch-point throughout the super system will have the same look and feel, only differentiated by content. This is also essential in promotional branding of UNCW itself.

Leadership Committee

The formation of a leadership committee is essential to the present and future successes of the digital signage display system currently in place. It was intimated during interviews, that no one unit wishes to be in complete control of the digital signage display system. Management and leadership of such an expansive system is not best suited to any one individual or unit, but rather by a committee comprised of mid and high level

managers. This committee would be charged with the development of rules, policies, and procedures that would govern the use of the system as well as in content presentation and possible ad revenue sources.

PRODUCTS

- 1.) Instructor Package
- 2.) Student guide
- 3.) SOP
- 4.) Job aids
- 5.) Assessment Material
- 6.) Evaluation Material
- 7.) Awareness Materials
- 8.) Video Tutorials

Instructor Package

Organization of Product

The designated staff instructor facilitating the workshop will be provided an instructor package prior to the workshop date so they may familiarize self with contents. The instructor package will be organized into three sections consisting of the front-end materials, presentation guide and reference materials.

A. Front-end Material

1. Table of Contents-Includes section titles and page numbers for each section, as well as appendixes to help the instructor navigate the guide
2. Using this Guide-Located directly after table of contents. Suggests ways to use the guide effectively & efficiently
3. Content and Instructional Procedures-Order of topics & subtopics. Suggested amount of time to spend on each topic & subtopic. Instructional strategies and how to properly employ them. Key points to emphasize. Situational scenarios / example responses
4. Logistics-The workshop will take place in a localized UNCW conference room. All UNCW conference rooms have at least eight, two person tables (which is sufficient in this case) and an instructor podium. They also are equipped with large flat screen digital displays that are connected to a computer with a keyboard and mouse (some conference rooms are equipped with wireless versions) for the PowerPoint presentations and tutorial introductions. Electrical power is typically easily accessible and in abundance. Resources
5. Resources

- Instructor Guide

- Student Guide
- Student Laptops
- Computer
- Digital Display
- Mouse and Keyboard (wired or wireless)
- PowerPoint Presentations
- Job Aids
- Video Tutorials
- Lesson-by-Lesson Assessment Activities and Key

6. Glossary-Technical terms that the instructor will need to be familiar with in order to conduct the workshop
7. Bibliography-A list of the resources the instructor should review prior to conducting the workshop

Instructional Methodology

This section will provide tips on utilizing a blended approach of both direct and discussion based with explanatory notes and suggested applications.

B. Presentation Guide

The content will be divided into four lessons by topic and arranged sequentially. Example:

LESSON 1 - DISCUSSION OF DIGITAL SIGNAGE SYSTEMS

- Overview of digital signage
- Terminology
- “Zoned” digital signage

Situational Scenario

Assessment Activity for Lesson 1

LESSON 2 - GETTING ACQUAINTED WITH THE SYSTEM AND ADMINISTRATIVE FUNCTIONS

- System requirements
- Accessing the system
- Using the administrative section
- Navigating the media creation section

Situational Scenario

Assessment Activity for Lesson 2

LESSON 3 - CREATING AND PUBLISHING A BULLETIN

- Starting a slide
- Choosing a template
- Filling in information
- Scheduling and publishing

Situational Scenario

Assessment Activity for Lesson 3

Lesson 4 - Managing Bulletins

- Accessing the management section
- Navigating the management section
- Editing an existing bulletin

Situational Scenario

Assessment Activity for Lesson 4

2. Each lesson will include:

- Lesson Objectives
- Requisite equipment and resources
- Practices and procedures to properly present the lesson
- Discussion questions and sample responses
- Sample responses to situational scenarios
- Lesson pacing guide
- Assessment Activities Feedback

C. Reference Section

- A copy of the student guide
- Copy images of PowerPoint slides
- Reference Materials

Student Guide

Organization of the Product

Upon invitation to the workshop, participants will be directed to the pdf link of this guide located on the community Wiki. This will provide an opportunity for self directed learning prior to the workshop. Participants will receive a bound paper copy at the workshop. The student guide will be comprised of two sections; front end materials and lessons guide sections

A. Front-end Materials

1. Table of Contents-Includes section titles and page numbers for each section, to assist student navigation
2. Using this Guide-Located directly after table of contents. Suggests ways to use the guide effectively & efficiently
3. Overview of the Guide - Provides a course description and outline. How and when there will be assessments. How the assessments will be graded
4. Lesson-by-Lesson Student Assessment Activities
5. Glossary of terminology to be used

B. Lesson Guide-divided into four subsections by lesson. Each subsection will include:

1. Lesson Objectives
2. Lesson introduction
3. Lesson Content
4. Lesson Summary
5. Reflective questions
6. Situational Scenario
7. Step by step instructions for completing all activities contained within lesson
8. Assessment Activity

Instructional materials

A. Instructor Materials- The instructor will use the computer hooked up to the digital display in the conference room. Prior to workshop they received access and location of PowerPoint presentations, and video tutorials on community Wiki as well provided with hard copies of job aids.

B. Student Materials- Participants were instructed to bring their laptops to the workshop and given instructions on necessary software applications they needed to download prior to workshop when they were invited to participate. The student guide will provide all other necessary hands on activities

SOP

A standard operating procedure will be created to detail the activities and procedures in training subordinate employees in utilizing the dsds. Additionally, policies and procedures, as well as templates that govern a centralized digital signage model will also be included. This is a very significant tool for the content managers and content producers to use. A hard copy will be provided to each participant during the training session. Each standard operating procedure will be printed by the printer and placed in a binder for the content manager to use. An electronic copy of the SOP will be uploaded and stored on the community wiki. Any future changes or editing of the SOP will be the responsibility of the DSDS Leadership Committee.

Job Aids

During the training sessions, job aids will be utilized by the instructor as visual reference. These will be used to help increase the relevance of the training. In addition, they will help support the instruction of the digital signage display systems. The job aids will consist of visual aids, reference sheets, and packets of the dsds process/content. The job aids will provide step-by-step instructions on how to use a digital display system. Employees will be able to access and download copies of the job aids from the Community Wiki to post and use within their individual departments. These job aids will be created by the media producer and part time instructional designer.

Assessment Materials

At the end of each lesson, content managers will demonstrate their knowledge by performing designed tasks on their laptops during the training session. These will be designed by the DSDS SME and Lead Instructional designer. An observational checklist and script of suggested tasks and activities will be utilized during the one on one teaching session by the digital signage display system subject matter expert to evaluate the manager's retention and transfer of knowledge gained from the training. The DSDS SME will act as the facilitator of learning and mentor the employee as needed. The DSDS SME will also give the content manager constructive feedback when appropriate. The instructor package will include a guide on how to complete the assessments on the content taught.

There will also be informal assessments at the end of each lesson to help build confidence and motivate the learner. Once the instructor evaluates the learners he may need to adjust the pace of the lessons to accommodate the learners.

Evaluation Materials

Evaluation is a crucial part of the training and will begin before the training sessions. The evaluation of the instructional materials will be broken down into three parts; initial review, one-on-one evaluation, and small group evaluation. During Phase 3 (draft of materials), after a product is completed it will be reviewed by a project team member for accuracy and freedom of typographical errors. During Phase 4 (Formative Evaluation of Materials), members will be selected from the project team to sit down with the instructional designers one-on-one and try to fix any problems. After that a small group evaluation will check over the instructional materials to make sure there are no errors with the entire project team.

Throughout the workshop, instructors will be formatively evaluating learners by monitoring, observing, asking questions, providing feedback and mentoring. In addition, after every lesson there will be an assessment.

At the end of the training session, the learner will receive a survey to complete about the effectiveness of the workshop. The survey will include multiple choice questions as well as open-ended questions. A second

survey and observational checklist will also be developed to be utilized by the lead instructional designer and project manager in their interview of trainees during summative evaluation phase.

Awareness Activities

The awareness activities are included in the training to promote the use of the digital signage display system. These activities may consist of short exercises, video clips (ex. DSDS in the real world), motivational speeches, and incentives to intrigue the content managers. Awareness activities will portray the benefits of participating in the training. These activities will help show content managers (learners) how important their job is and it will encourage them to attend and focus during the training. These activities will also act as a promotion of the training itself as they will be included in the email invitations to the training.

Video Clips

The training will consist of video tutorials created by the media producer, SME, and part time ID. These videos will be significant to the instruction process. The tutorial instructions will be included in the student package and instructor package. In addition, the tutorials will be accessible via the community wiki. These videos will take the form of scenarios and “how to” instructions.

PROJECT DESCRIPTION

Five essential phases, their individual tasks and subtasks were established and a flow chart (Appendix 1) was developed as a tool for determining the ideal sequence of events. A staffing chart was also developed to identify project team members (Appendix 2) and their responsibilities (Appendix 3) during the course of each individual phase. After both the flow chart and staffing chart were finalized, the main tasks were entered into Microsoft Project project management software, where the project timeline was established using a PERT chart. The PERT Chart (Appendix 4) identifies tasks that are dependent upon one another and those that can be completed in isolation. A Gantt chart (Appendix 5) was also created to provide a graphical illustration of the project schedule and staffing responsibilities for each task. Budgetary considerations for this project are almost wholly dedicated to team member salaries.

Evaluation occurs throughout all phases of the project in the form of review, formative evaluation of materials in phase 4, formative evaluation of the training in phase 5, and summative evaluation using the CIPP model.

The individual phases are described below chronologically in a procedural narrative of the five individual phases of the project and their subtasks below. The following descriptions are justifications for why the identified tasks are essentially integral to the successful implementation of the proposed workshop. A table that defines project team members and their responsibilities during each phase, time occurrence, and a description of the tasks and subtasks accompanies each corresponding narrative and is referred to and found within the Appendix.

Phase 1: Project Inception

Start Date: May 10th | End Date: May 12th

Steps in Flow Chart: Start Project and Plan Project

Staff Involved:

- 1. Project Manager
- 2. Lead Instructional Designer
- 3 Part time Instructional Designer

At the initial stage of the project, the Project Manager and Lead Instructional Designer will review all data collected during the Front end Analysis, being especially concerned with the data collected during interviews with the CIO and managers. The Part time Instructional designer will collect any additional data required.

During the project planning stage, team members were selected to staff the project. Members were chosen based on expertise, skill level, and roles/responsibilities within the operating system. It is recommended that all project team members are current faculty or staff members within the super-system. Once members are selected, project responsibilities are defined (Appendix 2) and assigned (Appendix 3), modes of communication and a project timeline are established, budgetary constraints are discussed and set (Appendix 11), and necessary resources are identified. Please refer to Appendix 6 for project member contributions during this phase.

Budgetary considerations for this phase are estimated to be \$1043.50

Phase 2: Planning Content

State Date: May 13th | End Date: May 20th

Steps in Flow Chart: Plan Content (Learner and Context Analysis, Write Performance Objectives, and Choose Instructional Strategies), Develop Assessment Items, Select and Reserve Workshop Location, Reserve and Schedule Workshop Instructor, Prepare and Implement Awareness Activities, and Develop Trainer Evaluation Survey.

Staff Involved:

- Project Manager
- Lead Instructional Designer
- Part time Instructional Designer
- Digital Signage Display System Subject Matter Expert

During this phase, the Lead Instructional Designer will work collaboratively with the Digital Signage Display System Subject Matter Expert. The SME is an expert in content and context for digital signage and will provide expertise and advice as to how to successfully reach the target audience for the training in deciding on Instructional Strategies to use and in the writing of the Performance Objectives after the Learner and Context Analysis is completed and carefully reviewed by both Instructional designers. The DSDS SME and the Instructional Designers will work collaboratively to develop appropriate assessment items, which will be reviewed by all team members involved in Phase 2. It should be noted that forms of assessment should be creatively achieved and should take the form of a performance indicator to encourage focus and resourcefulness in learning the tools. Additionally, the Project Manager will select and reserve the workshop location, reserve and schedule the workshop instructor, and review the awareness activities prior to

implementation and the trainer evaluation survey, all created and developed by the Part time ID. Please refer to Appendix 7 for project member contributions during this phase.

Budgetary considerations for this phase are estimated to be \$1,724.90

Phase 3: Content Development

State Date: May 21st | End Date: June 15th

Steps in Flow Chart: Develop Draft of Materials that includes: Instructor and Student Guide, Video Tutorials, SOP, Job Aids, PowerPoint's, Evaluation and Assessment Material. The online community support forum will also be established during this phase in the form of a local Wiki. Reserve Instructor

Staff Involved:

- Project Manager
- Lead Instructional Designer
- Part time Instructional Designer
- Digital Signage Display System Subject Matter Expert
- Content Manager
- Content Producer
- Media Producer
- Writer

At the onset of this phase, the project manager, instructional designers, DSDS SME, and media producer will work collaboratively to plan and map out the look and feel of the products to be delivered, as well as scripting of the videos and outlining the guides. Once the planning stage is complete, the lead ID and writer will develop the instructor and student guides, including necessary charts to be contained within. Simultaneously, the DSDS SME will develop the sop, while the media producer and part time id will develop the PowerPoint's, job aids, video tutorials, necessary graphics for inclusion in guides, and establish the community forum. While team members are developing the instructional products, they are sent to for review to other available team members, specifically the Content Manager and Producer, as well as the DSDS SME. The writer, during the review phase acts as a proofreader and editor. The project manager will reserve and schedule the instructor identified to facilitate the workshop.

During this phase, evaluative materials and tools will be developed for use post workshop delivery, post one on one teaching session, and post trainee training. These tools and materials will be vital to the overall program because of the information it will provide the project manager and lead id into the success of the workshop was in achieving its overall goals and objectives.

Once a complete draft of each product has been completed and reviewed, this phase is complete. This review, it should be noted is for layout, overall design, and typographical purposes, however it also allows for informal revisions and corrections prior to formal review. The project manager must ensure that each product has been developed and reviewed by at least 2 team members prior to signing off on product draft

completion. Formative evaluation of the products will be done during phase 4. For specific roles and responsibilities, please refer to Appendix 8.

Budgetary considerations for this phase are estimated to be \$5,558.30

Phase 4: Evaluation, Revision, and Master Production

State Date: June 16th | End Date: June 30th

Steps in Flow Chart: Formative Evaluation of Materials, Revise Materials, Print Materials and Upload copies to community forum/Wiki

Staff Involved:

- Project Manager
- Lead Instructional Designer
- Part time Instructional Designer
- Digital Signage Display System Subject Matter Expert
- Content Manager
- Content Producer
- Media Producer
- Writer
- Printer

Formative evaluation of the materials is to be conducted and led by both instructional designers. These evaluations will be conducted one on one with the other team members. The DSDS SME and content manager will be heavily relied upon and utilized during this phase, as they will take part in evaluating each product. The content producer will take part in evaluation of the student guide, video tutorials, and job aids, while the writer will assist in the evaluation of all to be printed materials. Once one on one evaluations are concluded and revisions notated, the entire project team will participate in small group evaluation of the materials, led by the lead instructional designer to determine feasibility of instructional design, program components, and delivery system.

Once formative evaluation is completed and recommendations for revisions are made and approved by the project manager, the instructional designers, media producer, and writer will work collaboratively to effectively and successfully implement the recommended changes and revise the materials to be delivered. After revisions have been completed, the final drafts will be reviewed once more by the project manager, lead instructional designer, and DSDS SME. Once this final review is complete and signed off by the project manager, the printable materials will be sent to the printer for packaging and printing. The media producer will upload copies of the materials to the community forum, including the video tutorials. Please see Appendix 9 for specific responsibilities during this phase.

Budgetary Considerations for this phase are estimated to be \$3,417.30

Phase 5: Workshop Conducted and Evaluated

State Date: July 2nd | End Date: July 30th

Steps in Flow Chart: Identify and Invite Participants, Conduct Workshop, Formative Evaluation, Summative Evaluation, and Write Report

Staff Involved:

- Project Manager
- Lead Instructional Designer
- Digital Signage Display System Subject Matter Expert
- Content Manager

Prior to the beginning of this phase, the project manager has compiled a list of possible participants for the workshop, by day 1 of this phase they have been invited to take part in the workshop. Once participants are established, the train the trainer workshop will be conducted. Content Managers of their respective departments, those who will train the content producers in the future are invited, but required to attend. The workshop is delivered and facilitated by the super-system's designated technology trainer in a two-hour workshop. During the training, the content managers will closely review both the instructor and student guides, watch the tutorials, and examine the assessment materials. Once the workshop is completed, the content managers are required to sign up for a "teaching" session with the DSDS SME. This is scheduled by the instructional designer. During this session, the content manager is required to teach what they learned about digital signage display systems in the workshop to the DSDS SME. This is to ensure that the training took and that the managers will correctly train their producers. The SME's role is one of student but also is there to offer corrective feedback and to help fill in any knowledge gaps. This session will also act as a formative evaluation tool for the project manager and id, as well as the training evaluation survey that content managers completed at the conclusion of the workshop.

The instructional designer will meet with and discuss the teaching sessions with the DSDS SME and analyze the results of the trainer's survey and report findings to the project manager. Once this is complete, there will be a one week down time in project progress. This allows the content managers ample time to train their content producers. This will also allow the content producers a chance to implement their new knowledge and skills. After this week of down time, the instructional designer and project manager will begin conducting a summative evaluation of the training. This will take the form of another site survey that will note significant changes in appearance and informational deliverables throughout the system. The summative evaluation will combine much of what was learned from the formative evaluation with a careful analysis of current practices throughout the system. The summative evaluation will measure the degree to which the major outcomes were achieved through the workshop. The project manager and instructional designer will use observations and interviews to determine what the impact of the workshop has had on the system as a whole. The id and project managers will also conduct formal interviews with the content producers, as well as with the content managers to see if the goals and objectives for the training were met with success. Once Summative Evaluation is concluded, the id and project manager will review the results of the training and the instructional designer and project manager will collaboratively produce a report of their findings. Please refer to Appendix 10 for project member responsibilities during this phase. It is recommended that a second summative evaluation be

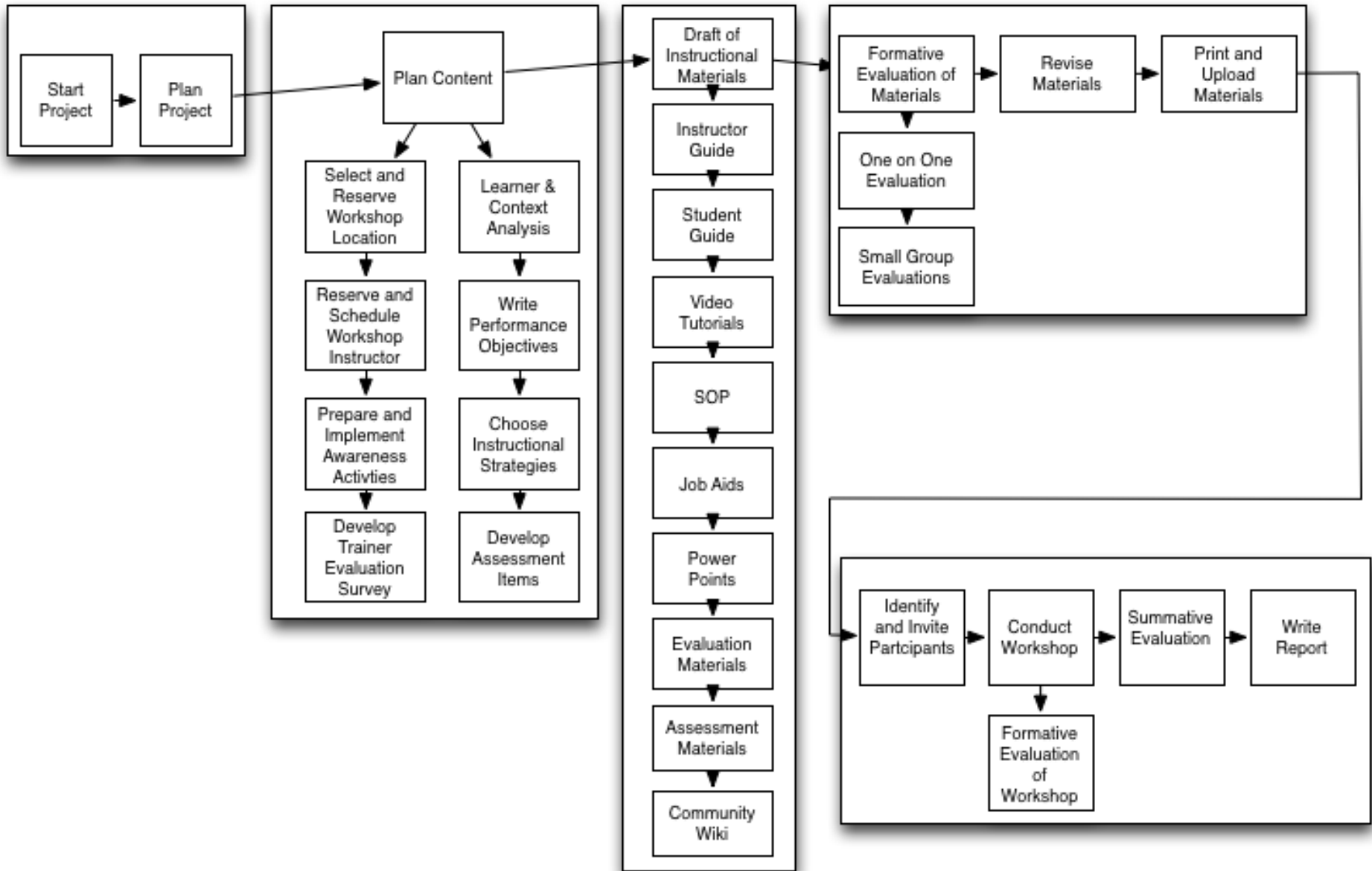
conducted six months from project end date and be completed by the DSDS Leadership Committee to ensure the effectiveness of the initial training and to assess if the system is truly operating in an optimal state.

Budgetary considerations for this phase are estimated to be \$1,536.80, which excludes the second suggested summative evaluation.

In summation, by adhering to the preceding implementation plan, the academic affairs division of UNCW will be able to effectively and successfully utilize the digital signage display system as it was intended, thus reducing the identified 64% performance gap.

APPENDIX

Appendix 1: Flow Chart



Appendix 2: Staffing Chart

Title	Description of Position
Project Manager	<ul style="list-style-type: none"> ● Full Time Position ● External Consultant with experience in Project Management and an understanding of Digital Signage Display Systems ● Responsible for the organization of the overall project as well as planning & reviewing the majority of tasks
Two Instructional Designers	<ul style="list-style-type: none"> ● 1 Full Time Position and 1 Part Time position ● External Consultants with experience in designing & developing Instructional Materials & Evaluations ● Responsible for planning, designing, developing & reviewing a number of tasks
Digital Signage Display System SME	<ul style="list-style-type: none"> ● Part Time Position ● Internal Consultant with experience in management, content production, and content administration of a Digital Signage Display System ● Responsible for planning and design of content related tasks
Content Manager	<ul style="list-style-type: none"> ● Part Time Position ● Internal Consultant with experience in managing a localized digital signage display system ● Responsible for checking several tasks
Content Producer	<ul style="list-style-type: none"> ● Part Time Position ● Internal Consultant with experience in content production for a digital signage display system ● Responsible for checking several tasks
Media Producer	<ul style="list-style-type: none"> ● Part Time Position ● Internal Consultant with experience in graphic design and video production related to SOPs, Job Aids & Instruction ● Responsible for planning & producing content for first draft of instructional materials
Writer	<ul style="list-style-type: none"> ● Part Time Position ● Responsible for proofreading, editing, and revision of first and final drafts of instructional materials, as well as for Summative Final report
Printer	<ul style="list-style-type: none"> ● Part Time Position ● External Consultant ● Responsible for printing materials

Appendix 3: Staff Project Responsibility Chart

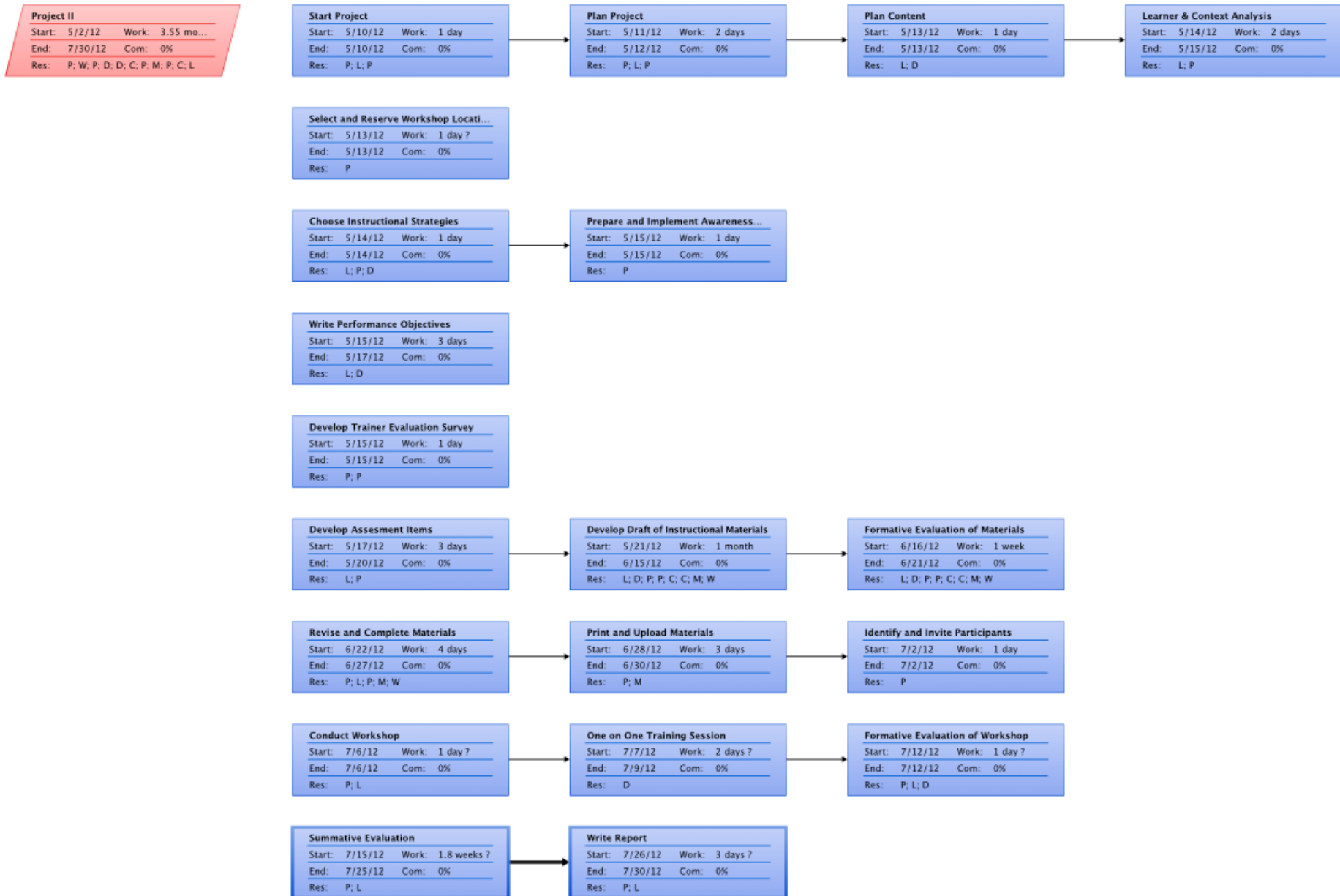
Major Event	Activity	Project Manager	Instructional Designer	Digital Signage SME	Content Manager	Content Producer	Media Producer	Writer	Printer
Phase 1: Project Inception <ul style="list-style-type: none"> • Start Project • Plan Project 	Plan	X							
	Do	X	X						
	Check	X	X						
Phase 2: Planning Content <ul style="list-style-type: none"> • Conduct Learner and Context Analysis • Write Objectives • Decide on Instructional Strategies • Develop Assessment Items 	Plan	X	X	X					
	Do		X	X					
	Check	X	X	X					
Location <ul style="list-style-type: none"> • Select Location • Reserve Location 	Do	X							
	Check								
Phase 3: Develop First Draft of Instructional Materials <ul style="list-style-type: none"> • Prepare Charts • Develop Instructor Guide 	Plan	X	X	X			X		
	Do								

<ul style="list-style-type: none"> • Develop Student Guide • Develop SOPs • Develop Assessments • Produce Video Tutorials • Power Points • Develop Job Aids • Create Community forum 									
	Do		X	X			X	X	
	Check	X	X	X	X	X	X		X
Reserve Instructor	Do	X							
Creating Awareness <ul style="list-style-type: none"> • Prepare awareness activities • Implement awareness activities 	Plan	X	X						
	Do		X				X	X	
	Check	X	X						
Develop Evaluation Survey For Trainers	Plan	X	X						
	Do		X						
	Check	X	X	X				X	

Phase 4: Formative Evaluation of Materials	Plan		X						
	Do		X	X	X	X	X	X	
	Check	X	X				X	X	
Revise Materials & Complete	Plan	X	X						
	Do		X				X	X	
	Check	X	X	X	X		X	X	
Print Materials	Plan	X							X
	Do								X
	Check	X	X	X				X	X
Phase 5: Identify and Invite Participants		X							
	Do								
Conduct Workshop	Plan	X							
	Check	X	X						
Formative Evaluation	Plan	X	X						
· Evaluate trainer's survey									
· Schedule one on one "teaching" session									
	Do		X	X	X				
	Check		X						
Summative Evaluation	Plan	X	X						

	Do	X	X						
	Check	X	X						
Write Report	Plan	X	X						
	Do		X						
	Check	X	X						

Appendix 4: PERT Chart



Appendix 5: Gantt Chart

(see attachment)

Appendix 6: Phase 1

Task	Dates	Team Members	Description
Start Project	May 10	<ul style="list-style-type: none"> • Project Manager • Lead Instructional Designer • Part-Time Instructional Designer 	<ul style="list-style-type: none"> • Review data collected during Front End Analysis
Plan Project	May 11-12		<ul style="list-style-type: none"> • Project team members selected • Project responsibilities defined and assigned • Budgetary constraints discussed and set • Project timeline established • Modes of communication established • Project goals determined • Necessary resources identified

Appendix 7: Phase 2

Task	Dates	Team Members	Description
Plan Content	May 13	<ul style="list-style-type: none"> • Digital Signage Display System Subject Matter Expert • Lead Instructional Designer 	<ul style="list-style-type: none"> • ID will work with SME to determine appropriate content and identify goals and objectives • Determine prerequisites, if any • Decide on logical sequencing of topics and subtopics

Learner and Context Analysis	May 13-14	<ul style="list-style-type: none"> • Lead Instructional Designer • Part-time Instructional Designer 	<ul style="list-style-type: none"> • Survey environment and potential learners for training • Evaluate data collected to determine what level training should be designed at and how to be delivered
Write Performance Objectives	May 15-17	<ul style="list-style-type: none"> • Digital Signage Display System Subject Matter Expert • Lead Instructional Designer 	<ul style="list-style-type: none"> • Identify related subtopics • Develop objectives for each topic, subtopic, and subtopic clusters • Use objectives to script and storyboard lessons
Choose Instructional Strategies	May 14	<ul style="list-style-type: none"> • Lead Instructional Designer • Part-time Instructional Designer • Digital Signage Display System Subject Matter Expert 	<ul style="list-style-type: none"> • Research and decide on instructional strategies that would best serve target audience in delivery of information
Develop Assessment Items	May 17-20	<ul style="list-style-type: none"> • Lead Instructional Designer • Part-time Instructional Designer 	<ul style="list-style-type: none"> • Design assessment items for each objective
Select and Reserve Workshop Location Reserve and Schedule Workshop Instructor	May 13	<ul style="list-style-type: none"> • Project Manager 	<ul style="list-style-type: none"> • Research available meeting spaces throughout system that are multimedia capable and available for targeted workshop date • Use super system reservation system to reserve space for workshop date
Prepare and Implement Awareness Activities	May 15	<ul style="list-style-type: none"> • Project Manager • Part-time Instructional Designer 	<ul style="list-style-type: none"> • Decide on, develop, and deliver awareness activities that promote and champion the upcoming training

Develop Trainer Evaluation Survey	May 15	<ul style="list-style-type: none"> • Project Manager • Part-time Instructional Designer 	<ul style="list-style-type: none"> • Create evaluation survey that will be completed by the managers trained in the workshop
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Appendix 8: Phase 3

Task	Dates	Team Members	Description
Develop Draft of Instructional Materials	May 21- June 15	<ul style="list-style-type: none"> • Project Manager • Lead Instructional Designer • Part time Instructional Designer • Digital Signage Display System Subject Matter Expert • Content Manager • Content Producer • Media Producer • Writer 	<ul style="list-style-type: none"> • Develop Instruction & Student Materials • Design & develop first draft of integral elements for each package • Develop general formats and guidelines for lesson plans • Use the objectives to develop visual elements(i.e. graphs, tables, charts, and images) for packages • Develop SOPs • Develop Video Tutorials • Develop Power Points for Instruction • Develop Job Aids • Design and develop Formative and Summative Evaluation Materials • Set Up Community Forum/Wiki • Develop and upload to server community forum/Wiki for trainer and trainee reference and support

Appendix 9: Phase 4

Task	Dates	Team Members	Description
Formative Evaluation of Materials	June 16- June 21	<ul style="list-style-type: none"> Project Manager Lead Instructional Designer Part time Instructional Designer Digital Signage Display System Subject Matter Expert Content Manager Content Producer Media Producer Writer 	<ul style="list-style-type: none"> One on One Evaluation Small Group Evaluation <p>Determine if...</p> <ul style="list-style-type: none"> The instructional design is effective The material components are objectively aligned and effective The delivery system is best choice for program
Revise and Complete Materials	June 22- June 27	<ul style="list-style-type: none"> Project Manager Lead Instructional Designer Part time Instructional Designer Media Producer Writer 	<ul style="list-style-type: none"> Make necessary revisions that were identified during formative evaluation and prior reviews Finalize all materials
Print and Upload Materials	June 28- June 30	<ul style="list-style-type: none"> Printer Media Producer 	<ul style="list-style-type: none"> Materials to be printed sent to and completed by printer PDF versions of printed materials, videos, and PowerPoint's uploaded to community forum/Wiki

Appendix 10: Phase 5

Task	Dates	Team Members	Description
Identify and Invite Participants	July 2	Project Manager	Participants for workshop identified and invited to participate in the training
Conduct Workshop	July 6	Project Manager Lead Instructional Designer	Project manager and id host and supervise workshop

One on one Training Session	July 7-July 9	Digital Signage Display System Subject Matter Expert	Evaluation of the transfer of knowledge gained during workshop on part of trainers
Formative Evaluation of Workshop	July 10-July 12	Lead Instructional Designer Project Manager Digital Signage Display System Subject Matter Expert	Review trainer surveys and one on one observation checklists to determine if goals of instruction achieved and if all necessary information was included
Summative Evaluation	July 15-July 25	Project Manager Lead Instructional Designer	Through interviews, observations, trainer, trainee, and site surveys to determine and evaluate retention and transfer of skills and knowledge
Write Report	July 26-July 30	Project Manager Lead Instructional Designer	Use all data collected during formative and summative evaluations to produce a report

Appendix 11: Estimated Budget

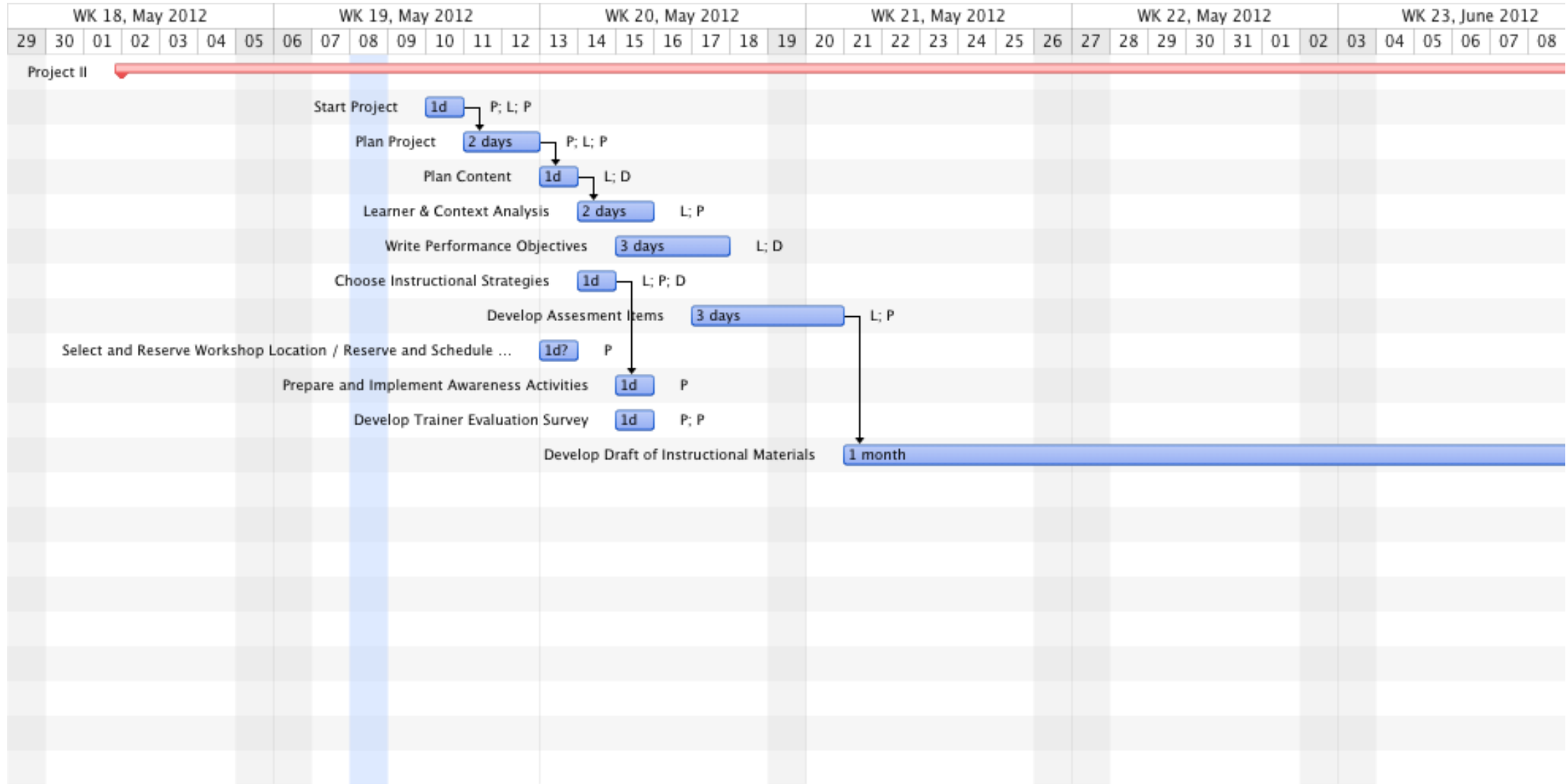
Position	Hourly Wage	Estimated Hours	Estimated Total Pay
Project Manager	\$43.40 (Annual Salary \$86,812)	120 hours	\$5208
Instructional Designer (Full Time)	\$24.54 (Annual Salary \$46,060)	120 hours	\$2944.80
Instructional Designer (Part Time)	\$24.54 (Annual Salary \$46,060)	80 hours	\$1963.20
Digital Signage Display System SME (Part Time)	\$21.50 (Annual salary \$43,000)	50 hours	\$1075
Content Manager (Part Time)	\$30.00 (Annual salary of 60,000)	25 hours	\$750
Content Producer (Part Time)	\$20.74 (Annual salary \$41,476)	20 hours	\$414.76
Media Producer (Part Time)	\$20.00 (Annual Salary \$40,000)	30 hours	\$600.00
Writer (Part Time)	\$11 (Annual Salary \$22,000)	30 hours	330.00

Estimated Total			\$11518.76
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Products produced by Printer

Product	Costs
Instructor Guide	\$15
Student Guides (10)	\$150
Job Aids	Different job aids are different costs: Poster 24 by 36 is \$80, worksheets/activities are \$20 (estimate \$250)
SOP (10)	\$200
Assessment Materials	Included in the Instructor and Student guides
Evaluation Materials	N/A (in office printing)
Estimated Total	\$615

ATTACHMENT



WK 24, June 2012							WK 25, June 2012							WK 26, June 2012							WK 27, July 2012							WK 28, July 2012							WK 29, July 2012							WK 30, July 2012							WK 31, August 20				
09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	01

