Web Based Learning Systems

Evaluation Plan Expert and User Review Report

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Introduction

The purpose of the formative evaluation of our proposed Web Based Learning System is to identify strengths and weakness of the instructional system so these can be addressed and improved before it is available to the users. The formative evaluation was scheduled to take place over a period of one week. However, some responses have not been received as anticipated. This report will be revised when we receive the feedback.

1. Background Information of Experts and Users

Three groups of evaluators were chosen based on their background and expertise: web design experts, content experts, and users. The table below lists their qualifications.

Expertise Category	Name	Qualifications
Web Design Expert	Steve H.	Professor at University of Akron
Web Design Expert	Suzanne T.	Project Director, Former Instructional Designer, University of Akron
Content Expert	John N.	Instructional Designer, University of Colorado
Content Expert	Henry P.	Director of Technology & Curriculum for Maple Heights City School
Potential User	Hank R.	Retired Director of Student Services, Painesville City Schools
Potential User	Kelli R.	Teacher, Twinsburg City Schools
Potential User	Christina W.	Principal of Bethlehem Christian Academy

2. Relevant Documents/Guides/Instruction

All of the experts, expect Suzanne, were contacted by phone and/or in person and provided a description of the project and what they were expected to do. Each received an email that repeated this information and a link to and a copy of the survey.

a. For Web Design Expert Review

Web Design Experts received an email with document attachments: (1) an explanation of the project (2) documents to be evaluated and (2) the Web Design Expert survey.

(1) Explanation of the Project

Web Expert Survey for Web Based Learning System

Preliminary Evaluations Expert Survey

The purpose of this survey is to provide feedback on the proposed design of our web-based instructional design system (WBLS) as it is being completed. Your responses will help us improve the design and effectiveness of the site. The WBLS is being developed as part of a Technology Professional Development Program for teachers at Bethlehem Christian Academy.

Bethlehem Christian Academy is a small Christian school located in Orange Village, Ohio. The school has an administrator and eight teachers with 93 students in Pre-K through Middle School (Eighth grade). School administration wants to integrate computer technology as a teaching and learning tool throughout the school. All of the teachers use the Internet at home for email; browse the Web and Microsoft Word for correspondence and to design worksheets and handouts for parents and students. However, few have the experience and skills to integrate technology in their teaching. The principal has professional development tentatively scheduled three times a year; however it is dependent on funding so it may be less. The principal has allocated 15 minutes of the weekly Teacher Meeting to provide professional development for technology, however this is insufficient to provide effective learning and collaboration. Therefore, we need to design a web-based learning system that will offer online tutorials, as well as resources that will encourage teacher interaction and offer support to encourage technology use in the classrooms.

Attached are the documents for your review.
Initial Task List – lists the learner tasks while using the WBLS
Task Flow Diagram – a diagram of the tasks within proposed design
User Interface Specification: Site Map – a map of the web pages and associated information and activities within the proposed design
Activity Guide/Direction – a description of the user activities listed by layers within the proposed design
Storyboards: Proposed designs for each web page category
Print screens of the prototypes for the Main Page, Module Pages, and Blog

After reviewing the documents, please complete the attached survey and return by email.

Thank you so much for agreeing to serve as a Web Expert.

The Web Design Experts received the following documents:

- Initial Task List
- Task Flow Diagram
- User Interface Specification: Site Map
- Activity Guide/Direction
- Storyboards
- Print screens of the prototypes for the Main Page, Module Pages, and Blog

(2) Web Expert Survey

The Web Expert Survey answered the following questions:

1. Is the website design appropriate for the content and learners?
2. Is the website structured appropriately for use?
3. Are the screens uncluttered and with good use of white space?
4. Does it have good navigational design?

b. Content Expert Review

Each of the Content Experts received an email with an explanation of the project, design documents, and a copy the Content Expert Survey.

(1) Explanation of the Project

> Attached are the Design Documents for the Web-Based Instructional Design prepared for Bethlehem Christian School. Please review the documents to make sure their in synch with the Prototype of the website. We are still in the Development Stage of the website and need your expert opinion of what we've prepared thus far. Also, there is an attachment form as well as this link to a survey we'll need you to complete. If you decide to complete the form, please email back to me, or if you decide to do the survey link, we'll have the results when you click the done button.
> Please respond by tonight or as soon as you can. Please let me know if you have any questions. The website to the Prototype is http://gozips.uakron.edu/~tlg57/CourseIntro.html
> Thank you for participating in our project.

The Content Experts received the following documents:

- Instructional Strategy Plan
- Initial Task List
- Prioritized Task List
- Functional Requirements List
- Prioritized Functional Requirements
- Task Flow Diagram
- User Interface Specification Module
- Activity Guide/Direction
- Storyboards of web site pages
- Screen prints and link to prototype site

(2) Content Experts Survey

The Content Experts answered the following questions:

1. Are the goals and objectives of the Web-Based Learning System (WBLS) clear?
2. Is there congruence between the instructional goals and content?
3. Is the content information clearly and concisely presented?
4. Is the information complete, covering the content properly?
5. Is the organization and structure of the message coherent?
6. Does it have good navigational design? Are the icons easy to use and clear as to their meaning?
7. Are the screen layouts appropriate to the content and goals?

c. Potential Users Review

Each of the Potential Users received an email with an explanation of the project, design documents, and a copy the Content Expert Survey.

(1) Explanation of the project

> Attached are the Design Documents for the Web-Based Instructional Design prepared for Bethlehem Christian School. Please review the documents to make sure their in synch with the Prototype of the website. We are still in the Development Stage of the website and need your expert opinion of what we've prepared thus far. Also, there is an attachment form as well as this link to a survey we'll need you to complete. If you decide to complete the form, please email back to me, or if you decide to do the survey link, we'll have the results when you click the done button.
> Please respond by tonight or as soon as you can. Please let me know if you have any questions. The website to the Prototype is http://gozips.uakron.edu/~tlg57/CourseIntro.html
> Thank you for participating in our project.

The Potential Users received the following documents:

- Instructional Strategy Plan
- Initial Task List
- Prioritized Task List
- Functional Requirements List
- Prioritized Functional Requirements
- Task Flow Diagram
- User Interface Specification Module
- Activity Guide/Direction
- Storyboards of web site pages
- Screen prints and link to prototype site

(2) Potential Users Survey

The Potential Users answered the following questions:

1. Are the goals and objectives of the Web-Based Learning System (WBLS) clear?
2. Are the questions clearly stated?
3. Any typographical, spelling, grammar, punctuation errors?
4. Is navigation easy?
5. Does it have good navigational design? Are the icons easy to use and clear as to their meaning?
6. Are the messages and media pleasing?
7. Are the graphics, animations, and sound clear?
8. Is the color, typeface, emphasis used appropriately and enhance learning?

3. Results/Findings for Expert & User Reviews

a. Web Design Experts

The web design expert survey results indicated that the overall design of the site meets the needs of the learner. It is easy to read, with with clear directions and navigation with the web design appropriate for the content and learners. No additional suggestions were made for improvement. See Appendix A for a table of their responses.

b. Content Experts

Feedback from the content experts was mixed. One content expert thought the course content did not match the stated goal. He also noted that the modules needed to contain learning objectives. The other content expert thought the goals and objectives were clear, the instructional goals and content were aligned, the information was complete and coherent, and layout and navigation was clear and appropriate. See Appendix B for a table of their responses.

c. Potential Users

Feedback from the potential users was mostly positive, with two of the three users suggesting minor changes. Some suggestions were due to their reviewing the uncompleted web site. They did suggest some minor changes in navigation menus. See Appendix C for a table of their responses.

4. Ideas for modification for design products

Based on the feedback we have received so far, the following modifications are being made to the WBLS:

- The Web Design Experts thought the design of the WBLS met the stated goals of the site. Therefore, the fundamental design of the site does not need to be changed.

- The Content Experts feedback is incomplete at this time. However, based on the feedback from one Content Expert, we will revise the stated goals of the course. In addition, learning objectives will be added to the introductory text for each module, and questions about these objectives will be added to the Discussion Boards.

- The Potential Users feedback was generally positive, with most agreeing that the appearance, navigation, text, and other items on the page were well done. Two of the three Potential Users suggested improvements such as drop down menus in each module and enhancing titles on the left and right columns of the page to improve the visibility of the links. One Potential User tested the web site and noted problems with navigation and broken links. These will be addressed after the Usability Test. After review of the feedback and reviewing the operation and appearance of the site, it was decided to forego the dropdown menus, but consider changing the background colors and/or the text in the side columns.

Appendices

Appendix A: Feedback from Web Designers

Web Design Expert Survey Questions	Web Design Expert #1: Steve	Web Design Expert #2 Suzanne
1. Is the website design appropriate for the content and learners?		
	Yes It looks as though learners should be able to use it easily and the content appears appropriate	Yes
2. Is the website structured appropriately for use?		
	Yes The website structure appears to be appropriate for use	Yes
3. Are the screens uncluttered and with good use of white space?		
	Yes They appear to be easy to read with plenty of white space.	Yes Design is clean and pleasing to the learner.
4. Does it have good navigational design?		
	Yes It appears to be easy to navigate.	Yes Navigation is placed appropriately
5. Additional Comments	This website should help the teachers at Bethlehem Christian Academy integrate computer technology as a teaching and learning tool throughout the school	none

Appendix B: Feedback from Content Experts

Content Experts Survey Questions	Content Expert #1: John	Content Expert #2 Henry P.
1. Are the goals and objectives of the Web-Based Learning System (WBLS) clear?		
	n/a	yes
2. Is there congruence between the instructional goals and content?		
	n/a	yes
3. Is the content information clearly and concisely presented?		
	n/a	yes
4. Is the information complete, covering the content properly?		
	n/a	yes
5. Is the organization and structure of the message coherent?		
	n/a	yes
6. Does it have good navigational design? Are the icons easy to use and clear as to their meaning?		
	n/a	yes
7. Are the screen layouts appropriate to the content and goals?		
	n/a	yes
8. Additional Comments	I am confused. I am not sure what I am supposed to do. I did not see any form to be completed. The document you sent ate the same-one in pdf format and the other in Word. The stated goal of the instructional class seems to differ from lesson/course content. The goal states that at the end of the course, the learners will be able to use technology in their classes and then the module is about wikki. Also, I did not see any learning objectives for each module. Maybe we can talk on the phone when we are both looking at the documents.	

Appendix C: Feedback from Potential Users

Potential Users Survey Questions	#1 Henry R.	#2 Stephanie Z.	#3 Kelli
1. Are the goals and objectives of the Web-Based Learning System (WBLS) clear?			
	yes	yes	Yes
2. Are the questions clearly stated?			
	yes	yes	Yes Home Page…spacing after parenthesis, also since there are two instructors I would edit in the Module section and change reference from "I" to "we."
3. Any typographical, spelling, grammar, punctuation errors?			
	no	No The "create wiki account" link in Module 1 does not work. The "Download Audacity" link in Module 2 does not work. When in Modules 2, 3, or 4 you cannot go back to module 1, you have to go home and then to Module 1. You can access any of the other modules from any other, just not 1. The link at the bottom of "Create a new wiki Account" sends me back to an previous version of the web site and not the current one.	Yes
4. Is the color, typeface, emphasis used appropriately and enhance learning?			
	yes	Yes	Yes I would enhance the titles on both left and right bar so they stand out from the Modules, etc.
5. Is navigation easy?			
	yes	yes	Yes
6. Does it have good navigational design? Are the icons easy to use and clear as to their meaning?			
	yes	Yes I thought it might be helpful to have a dropdown menu of the links in each module.	Yes
7. Are the messages and media pleasing?			
	Yes	Yes	Yes
8. Are the graphics, animations, and sound clear?			
	Yes Only graphics, no animation	Yes The "screen shots" in the instructional links were blurry. The instructions were clear and that was how I knew where to click, not from the pictures. You can only get a general idea from the pictures.	Yes

Potential Users Survey Questions	#1 Henry R.	#2 Stephanie Z.	#3 Kelli
9. Additional Comments	All aspects of your Web-Based IDE were very clear & understandable however, your 3.3 module was unreadable. Maybe this was for example purposes only)		

Appendix D: Relevant Review Documents

Instructional Strategy Plan

Orientation to Learning	**Instructional Strategies**
1. Provide an overview	Welcome, Introduction, and course description presented on home page.
2. State the objectives	• The goals and objectives of the WBI are listed on home page.
3. Explain relevance of instruction	• Pictures and description in the overview explain and demonstrate how technology tools in the WBI are used placed on home page.
4. Assist learner recall of prior knowledge, skills, and experiences	• Learners introduce themselves and describe their prior experiences and goals for using technology.
5. Provide directions on how to start, navigate, and proceed through the unit of instruction	• Relevant instructions for creating accounts and profile pictures sent to teachers. • Link to site map and description of resources placed on site.
Instruction on the Content	**Instructional Strategies**
1. Present instructional content	• In Module 1, learners will be instructed on creating a Classroom Wiki. Instruction will use text, multimedia, and video presentations. Instructional content will be provided through tutorials and examples. • In Module 2, , learners will be instructed on using Audacity to create digital recordings. Instruction will be presented using text, multimedia, and video presentations. Instructional content will be provided through tutorials and examples. • In Module 3, learners will be instructed on using video in teaching. Instruction will use text, multimedia, and video presentations. Instructional content will be provided through tutorials and examples. • In Module 4, learners will be instructed on using Google docs. They will create a Gmail account and use GoogleDocs to create and share documents, multimedia, and video presentations. Instructional content will be provided through tutorials and examples. • In Module 5 learners will review the previous lessons and concepts, and post a presentation where they demonstrate the what they have

	learned.
2. Provide learning cues	• Provide checklists for activities and content • Have discussion among learners
3. Present opportunities for practice	• In Meeting #1 learners will add content to the Classroom Wiki including a profile picture, text, record a message, and add videos on internet safety. Learners will write and add content to the Classroom Wiki from articles, videos and activities. • In Meeting #2 learners will use Audacity to record and edit audio to include in Classroom Wiki. • In Meeting #3 learners will use YouTube to locate internet safety videos to include in Classroom Wiki. • In Meeting #4 learners will create a blog and add it to their Classroom Wiki for parents and students to provide feedback on Internet Safety. Learners will post on the blog a comment/question on internet safety for response by students and parents. • In Meeting #4 learners will learn to share documents using Google Docs
4. Provide feedback on practice performance	• Learners will review and comment on wikis by colleagues. • Feedback will be given by instructor
5. Provide review of and close the unit of instruction	• Previous learning will be reviewed at the end of the lesson • Summaries of lesson are posted by learners
Measurement of Learning	**Instructional Strategies**
1. Assess performance	• Learners will be assessed by completion of the classroom wiki
2. Advise learner of performance scores	• Checklist and rubric will be used for learners to self-check work
Summary and Close	**Instructional Strategies**
1. Enhance and enrich learning	• Have learners suggest next steps and additions to Classroom Wiki
2. Provide remediation for unmet objectives	• Provide checklist of unmet objectives and instructions to finish.
3. Provide opportunities for retention	• Have learners suggest future additions to wikis.

Initial Task List

At the end of the web based instruction the learners will be able to use computer applications to collaborate including share ideas, solve problems, and plan in a school-wide effort to integrate technology in the classrooms.

While using this website, learners should be able to:

Awareness and Skills

- Locate course learning content
- Select lessons and content as directed
- Read and add comments to blog
- Create a document using Google Docs
- Share a document using Google Docs
- Create account on Wikispaces
- Download and install Audacity
- Make recordings using Audacity
- Edit voice and sound in Audacity
- View Internet Safety Videos
- Create age appropriate content on Internet Safety to upload into Classroom Wikispaces

Application

- Create a classroom wiki using Wikispaces
- Upload audio files to Classroom Wikispaces
- Upload embedded video into Classroom Wikispaces
- Open and comment on blog entries

Social Interaction

- Respond to blog postings by instructor and colleagues
- Contact others in Google
- Participate in class discussions online

Resource Sharing

- Upload and download resource files
- Use external links to other websites

Video Clips

- Watch embedded video clips

Help

- Locate the Help command on the page
- Contact support via email

Prioritized Task List

Core Functionality
+ Important Functionality
& Nice to have Functionality

Frequent by Many
Create learner profile
Install Audacity
Locate course learning content
Select lessons and content as needed
Complete lessons as directed
Read and comment on blog postings

Frequent by Few

Occasional by Many
Upload and download resource files
Watch embedded video clips
View internet safety videos
Create an account on Wikispaces
#Create a classroom wiki using Wikispaces
Create age appropriate content on Internet Safety to upload into Classroom Wikispaces
Upload embedded video into Classroom Wikispaces
#Upload audio files to classroom wiki
Send email to WBLS administrator(s)
+ Create a document using Google Docs
+ Share a document using Google Docs
+ Download and install Audacity
+ Make recordings using Audacity
+ Edit voice and sound in Audacity
& Use external links to other websites

Occasional by Few
& Locate the Help command on the page
& Give feedback on lessons
# Send email to WLBS instructor(s)

Functional Requirements List

Proposed Requirements

Awareness

- Ability to create password
- Ability to input ID and password to login
- Ability to retrieve a lost or forgotten password
- Indication of links to essential functions
- Ability to use blog for classroom discussion
- Ability to create user accounts in Wikispaces, and Google Docs
- Ability to complete Classroom Wiki project
- Ability to play, pause, repeat, and adjust volume and screen size of embedded video
- Ability to send a message to colleagues and instructor

Discussion

- Reply to blogs on WBLS
- Reply to colleagues post in Classroom Wikispaces
- Ability to share URLs of created Classroom wiki and Google Docs documents

Resource Sharing

- Ability to view links to websites

Video Clips

- Ability to view, upload, download and embed video clips
- Ability to play, pause, repeat, and adjust volume and screen size of embedded video

Set-Up/Registration

- Ability to create a new account
- Ability to login using a username and password
- Ability to log out at any time

Help

- Ability to read the introduction to the website (purpose and goal)
- Ability review recorded lessons overview
- Ability to ask questions about assigned activities
- Ability to contact support via email

Prioritized Functional Requirements

Core Functionality
+ Important Functionality
& Nice to have Functionality

Awareness

How to use the functions of each page
How to find the required information
Ability to create user accounts in Wikispaces, and Google Docs
Ability to complete Classroom Wiki project
Ability to play, pause, repeat, and adjust volume and screen size of embedded video
Ability to send a message to colleagues and instructor who are online and offline
+ How to retrieve a lost or forgotten password

Discussion

#Reply to blogs on WBLS
Ability to share URLs of created Classroom wiki and Google Docs documents
+ Reply to colleagues post in Classroom Wikispaces

Resource Sharing

Ability to view links to websites

Video Clips

Ability to view, upload and download video clips
Ability to play, pause, repeat, and adjust volume and screen size of embedded video

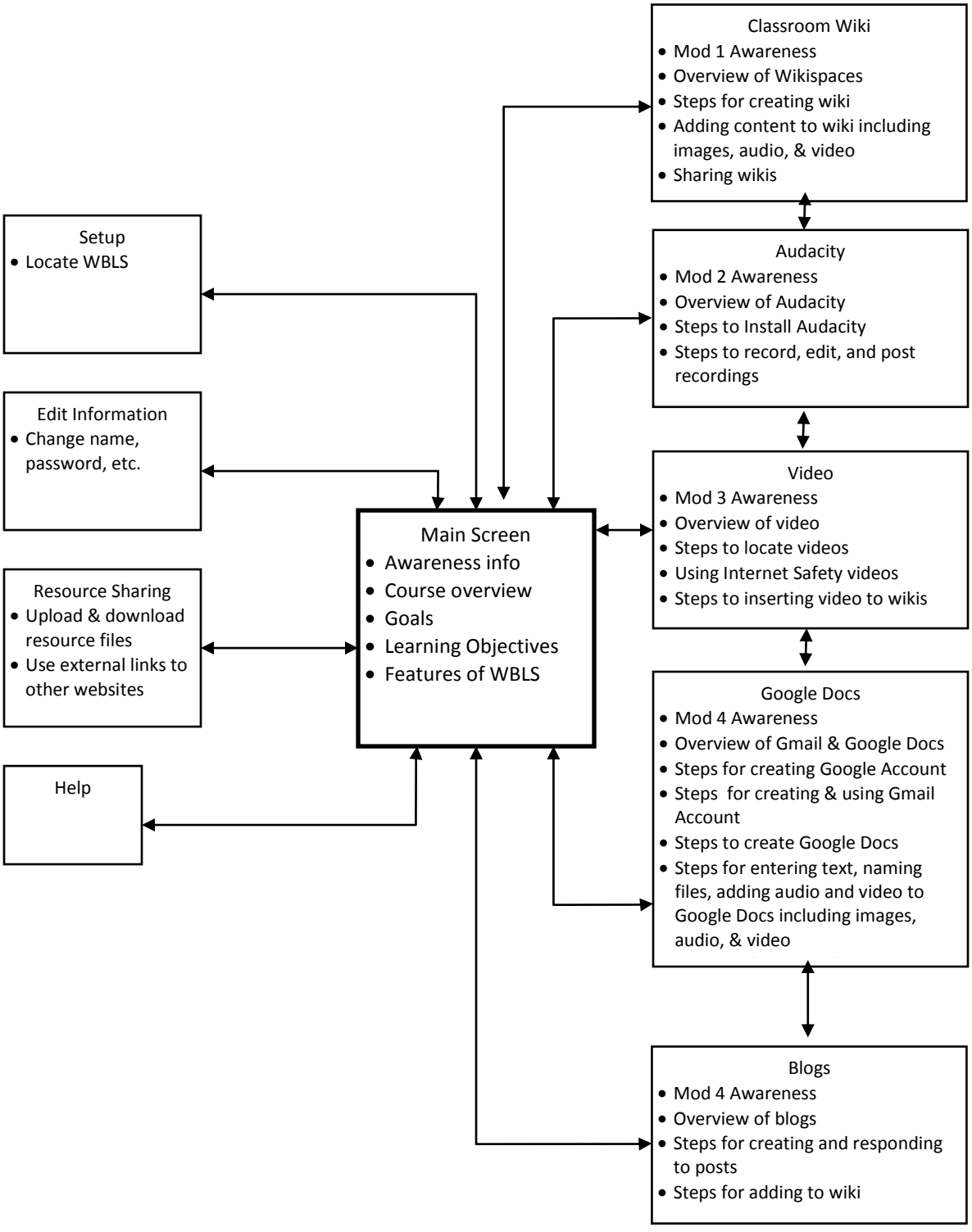
Set-Up/Registration

Ability to create a new account
Ability to login using a username and password
Ability to log out at any time

Help

Ability to read the introduction to the website (purpose and goal)
Ability review recorded lessons
+ Ability to ask questions about assigned activities
+ Ability to contact support via email

Task Flow Diagram



Scenarios

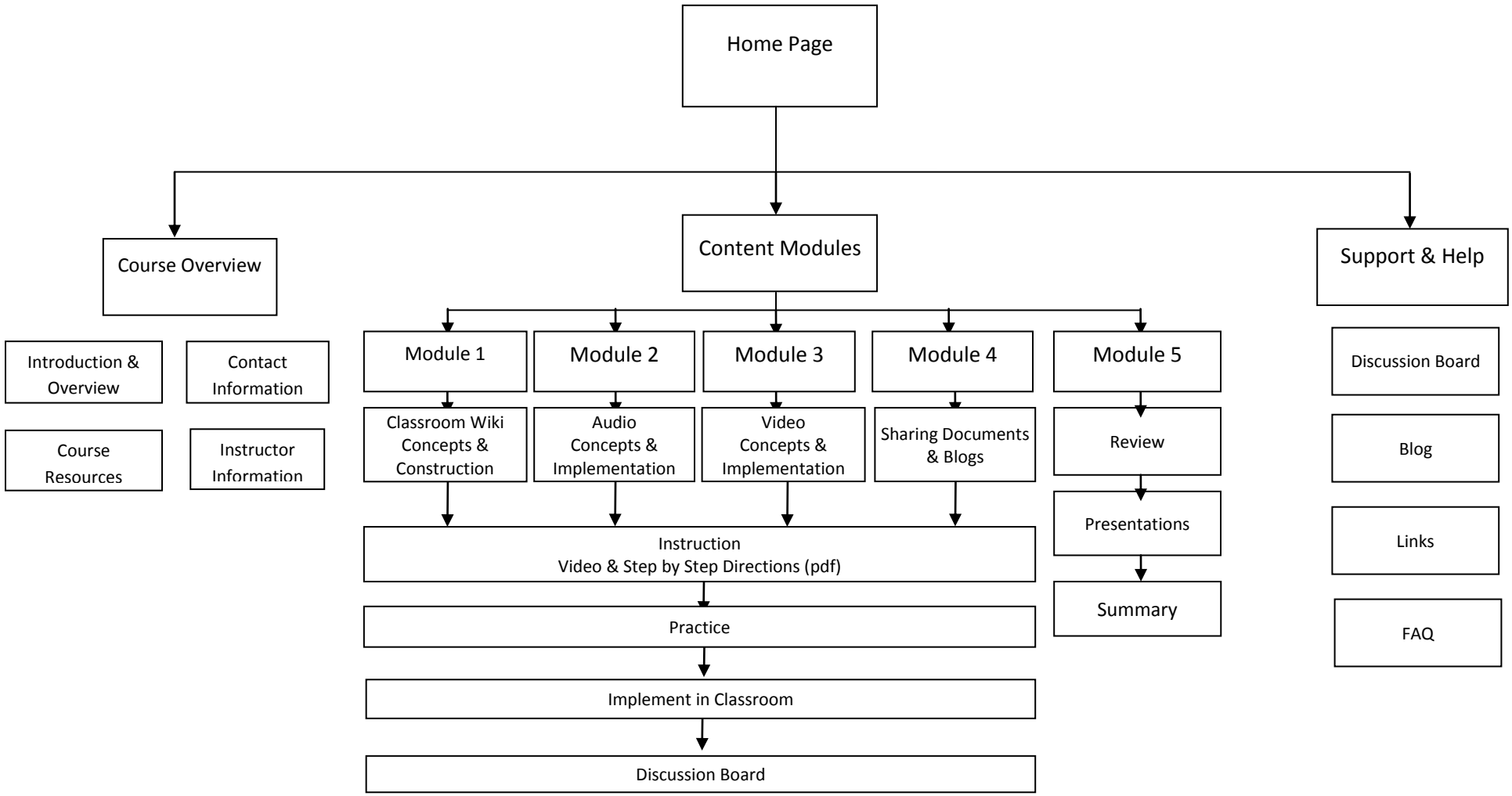
Scenario 1: Envision a student who is in a hurry and wanting to be as efficient as possible in an individual learning task.

The student/learner is a fifth grade teacher. He has to create an audio to upload to the classroom wiki by tonight so he can tell parents about the upcoming field trip. He has report cards and grading to finish up so he doesn't have much time to complete the lesson on Audacity and get the recording uploaded to the classroom wiki. When he comes home from school, he goes to his home computer and logs on to the WBLS. He selects the link to the web page with the lesson on Audacity. He downloads and installs the Audacity software. Then he plugs in his headset with the microphone, and completes the lesson, and makes the recording for the wiki. He edits the recording and uploads the completed recording to the classroom wiki by 6 p.m. so the students and parents can listen to the recording before signing the permission slips that evening for the field trip.

Scenario 2: Envision a student who wants to have an efficient and effective collaborative work with his/her teammates in the WBLS and achieving at a high level of performance.

The student/learner is the school principal who wants to work with three teachers to create standards for the classroom wikis throughout the school. Since the principal is busy all week with meetings, she needs to collaborate with the teachers using shared documents. All of the members of the group need to complete the lesson on sharing Google Documents in order to collaborate. First, each teacher goes to the lesson in Module 4, and selects the video and links for sharing Google Documents. They open and read the document from the principal, offer suggestions, and the principal finalizes and distributes the document to the teachers.

User Interface Specification Site Map



Activity Guide/Direction

Layer 1: Navigational Interface

The navigational interface is designed to provide learners access to content in a clear and straightforward manner. The navigation menu appears consistently in the left column. It contains links to the all the tasks and recourses for the course. Submenus were not used to avoid "hidden" options that could mislead or frustrate learners.

There are three sections to the WBLS: Course Overview, Content Modules, and Support & Help. Links to each section and the contents of each section are contained in the Navigation Menu.

Layer 2: Front Page Content

The front page and all other pages contain the following:

- WBLS Title
- Navigation Menu in the left column (including contact information for the instructors)
- Information Bar at the bottom of the page containing
    - Course announcements and updates
    - Maintenance information
    - Media credits
- Course welcome with introductory text (with appropriate graphic and introductory text)
- Information on Navigating the Web Site that includes a short description of Course Overview, Content Modules, and Support and Help pages, as well as the navigation menu.

Layer 3: Course Welcome and Introduction

The Course Welcome and Introduction on the Front Page contains

- Text: a brief welcome message from the instructors, course introduction, introduction to the instructors, instructions for navigating the site, and instructions for learners to post introductions for themselves on the web site.
- Graphics: Photos of instructors, a logo, and graphics to support text content and functions.
- Navigation links to other web pages.

Layer 4: Content Modules

The Content Modules can be reached from all pages using the Navigation Menu, as well as the Content Module Web Page. Each of the Modules 1 through 4 contains

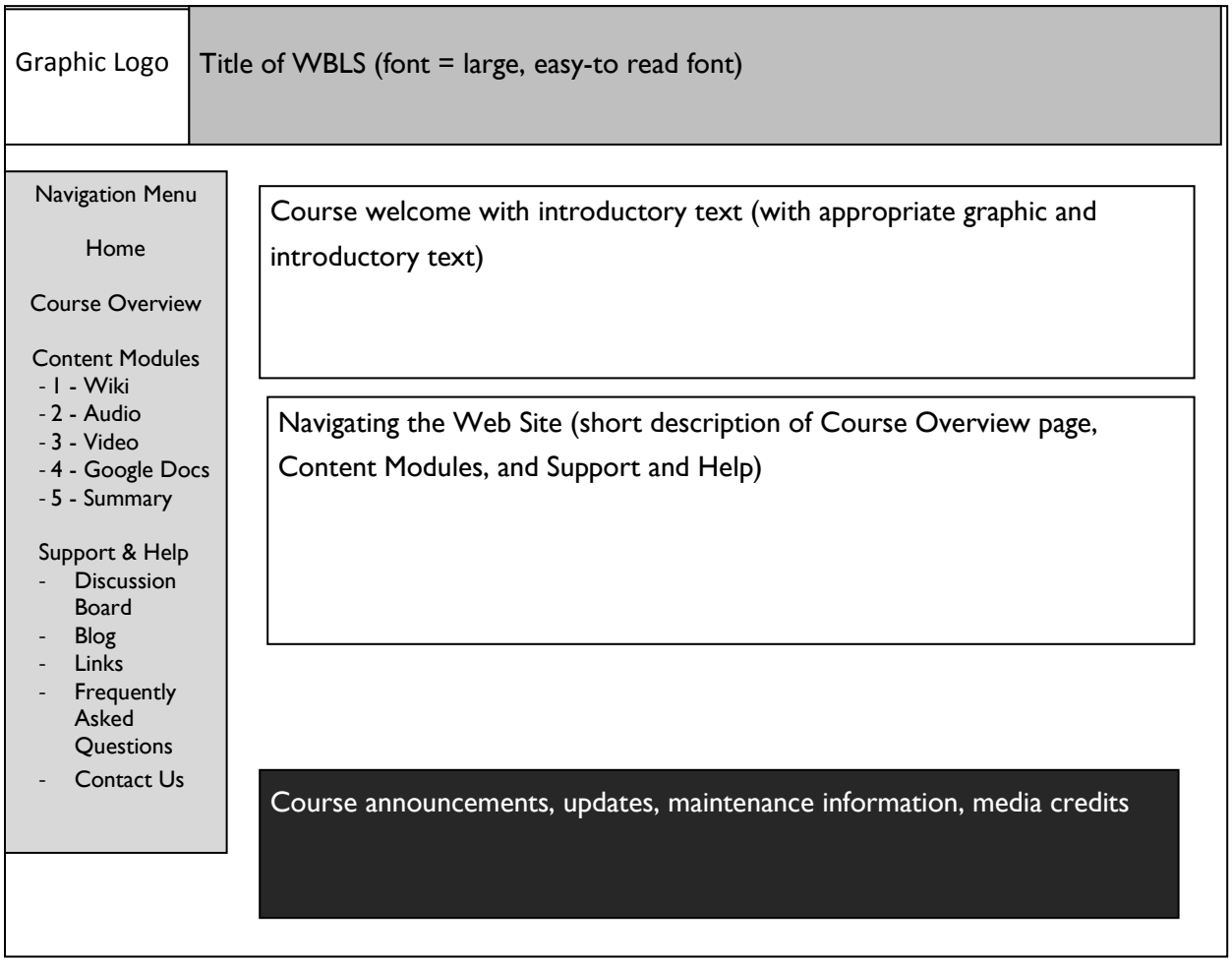
- Text describing the purpose and goals of the module,
- Instructional media such as YouTube video, PowerPoint slideshow, document or website simulator, other video
- Link to a .pdf with instructions for the lesson
- Link to the Discussion Board, Blog, and related links
- Email Links to the instructors

Content Module 5 contains:

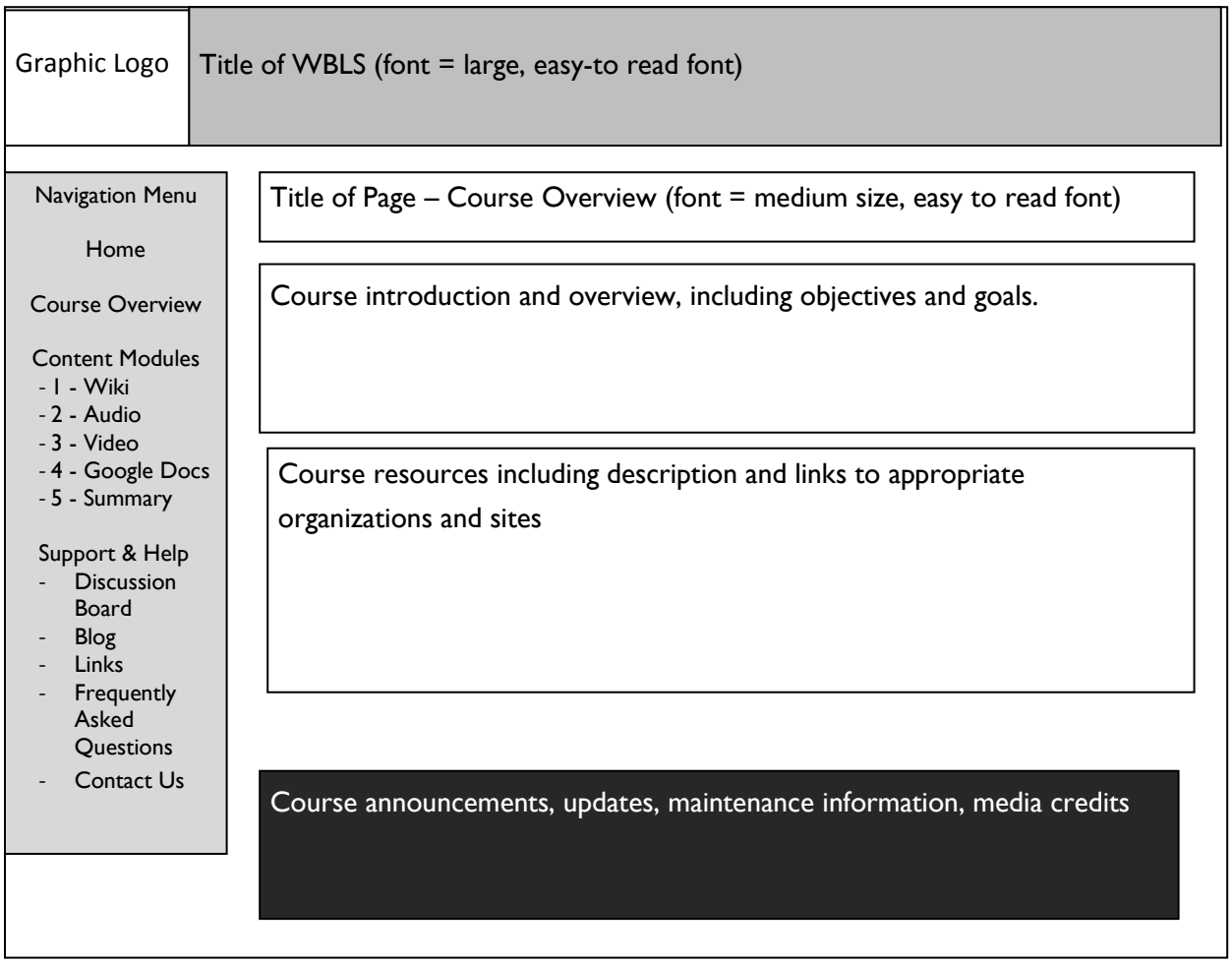
- Instructional review of concepts, goals, and tasks
- Learner presentations
- Summary of lessons

Layer 5: Support and Help
The Support and Help page contains descriptions and links to the Discussion Board, Instructor Blog, links with additional information, contact information, and a Frequently Asked Question (FAQ) page(s).

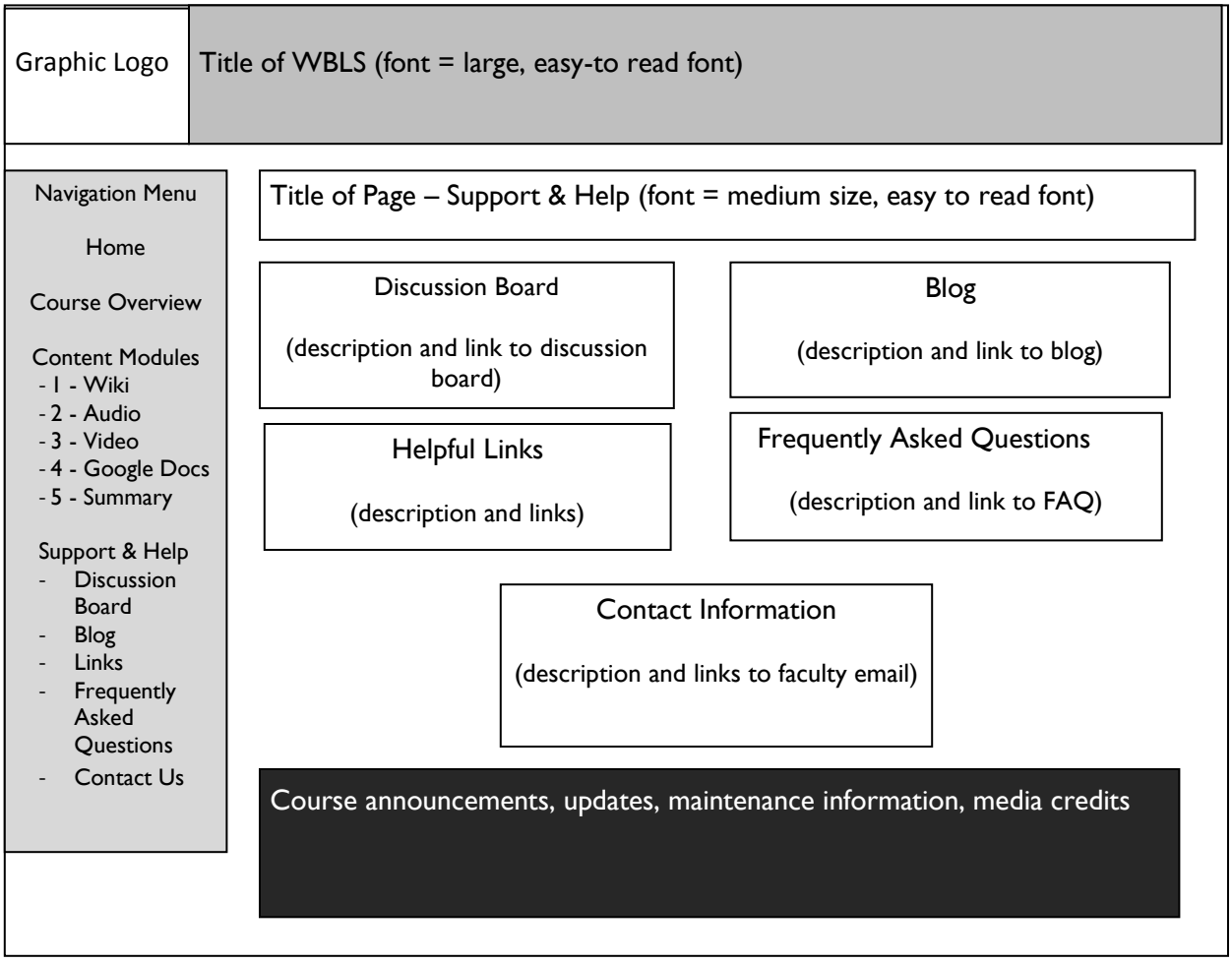
Storyboards:
Main Page Interface



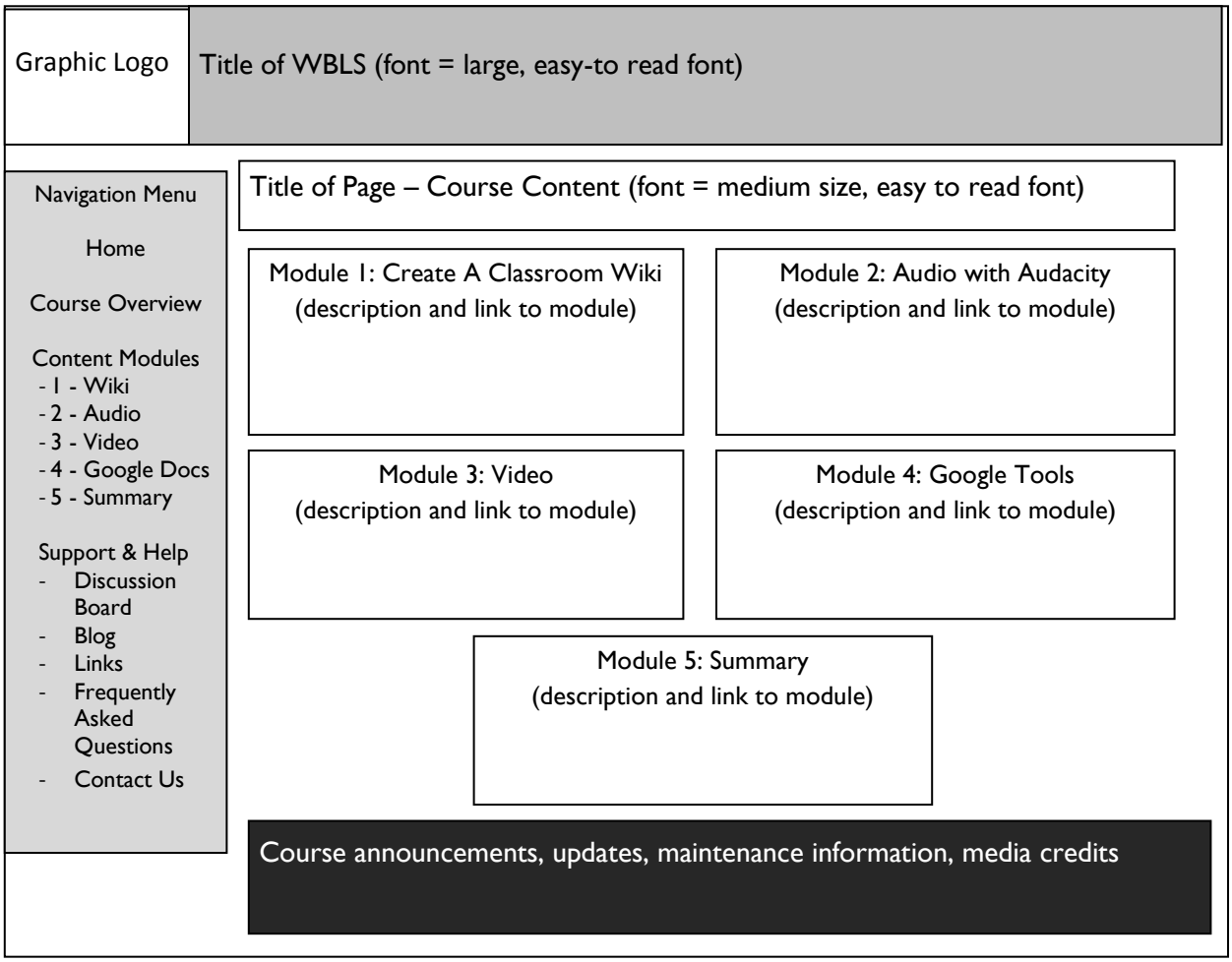
Sub Page Interface *Course Overview*



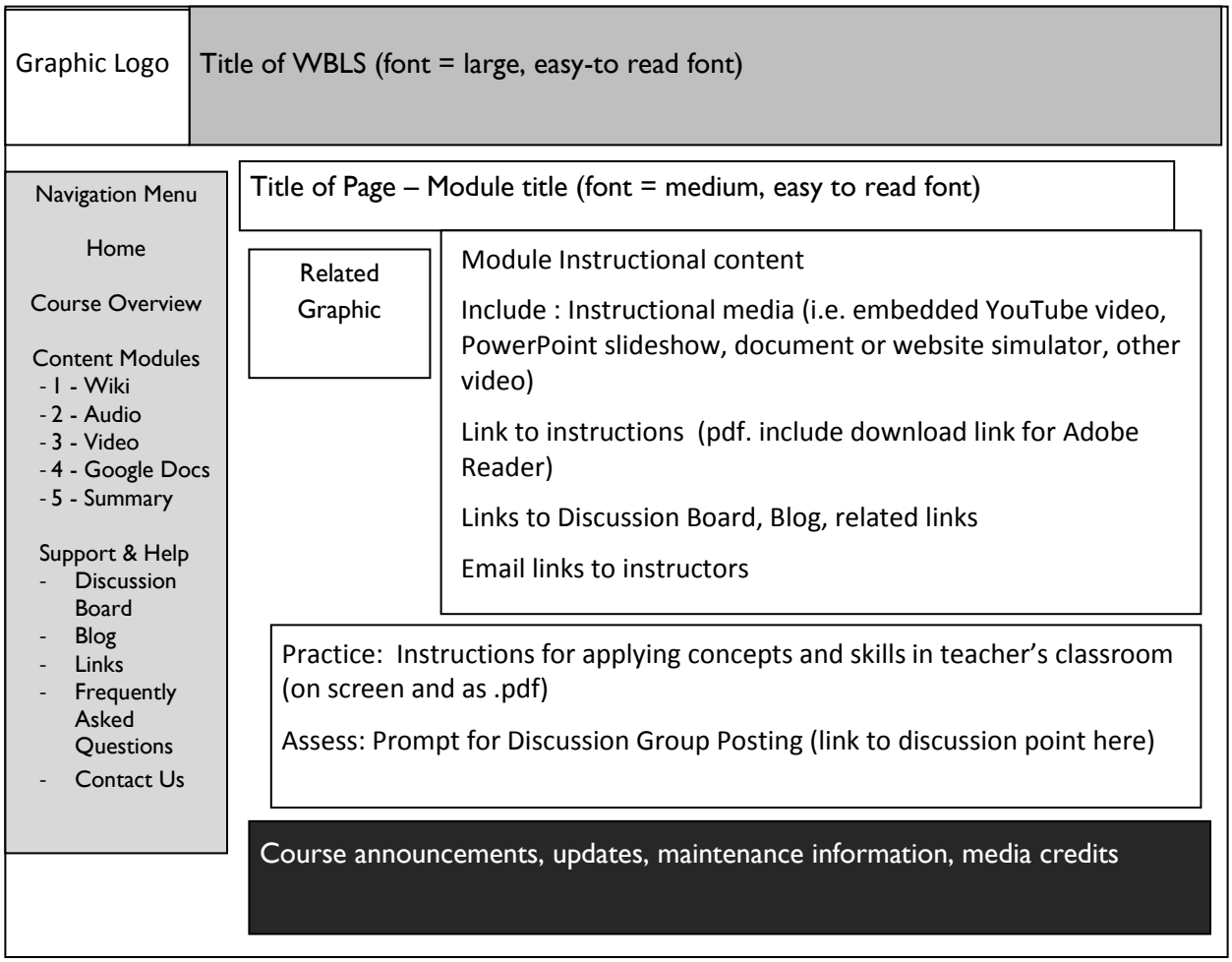
Sub Page Interface *Support and Help*



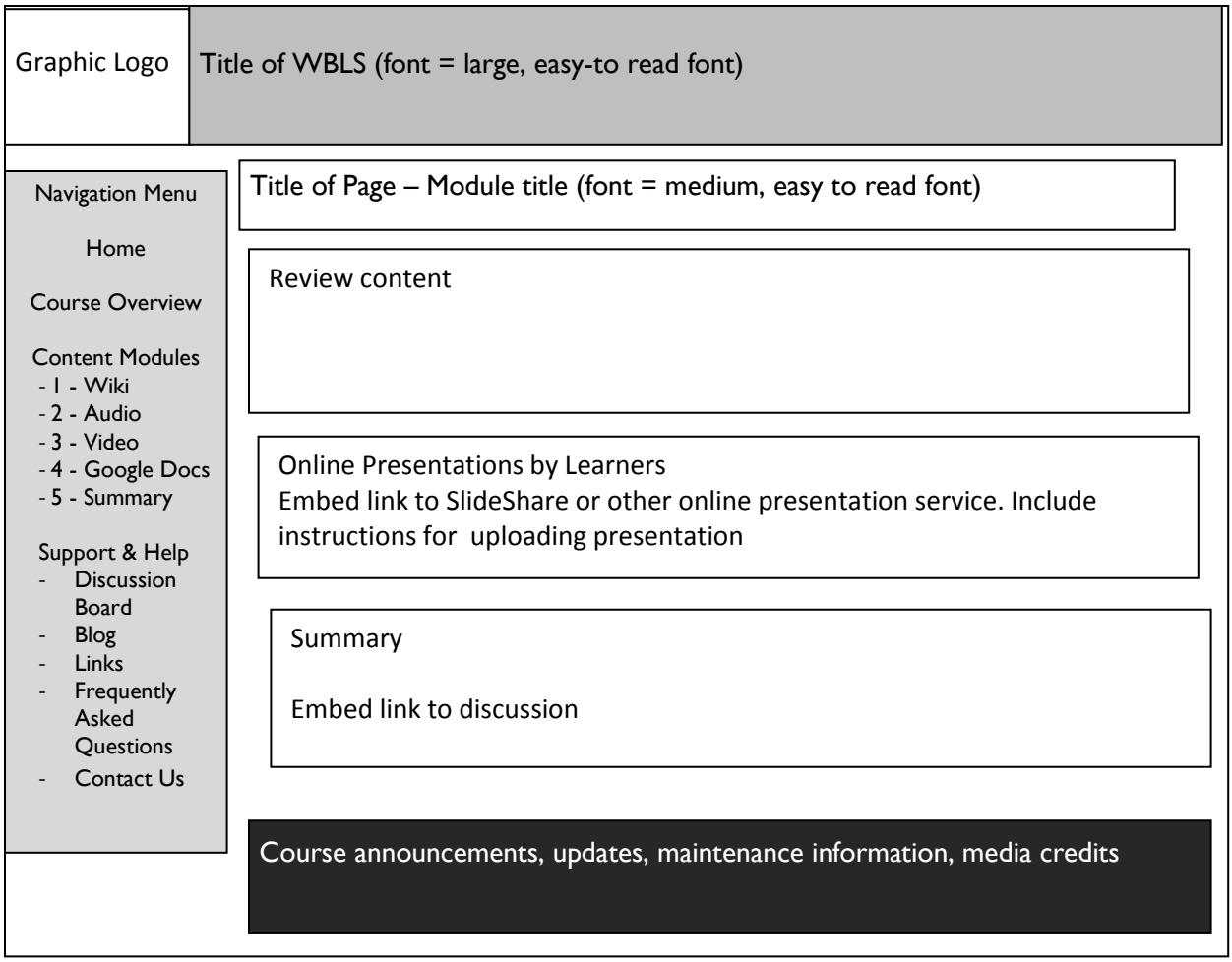
Sub Page Interface *Course Content*



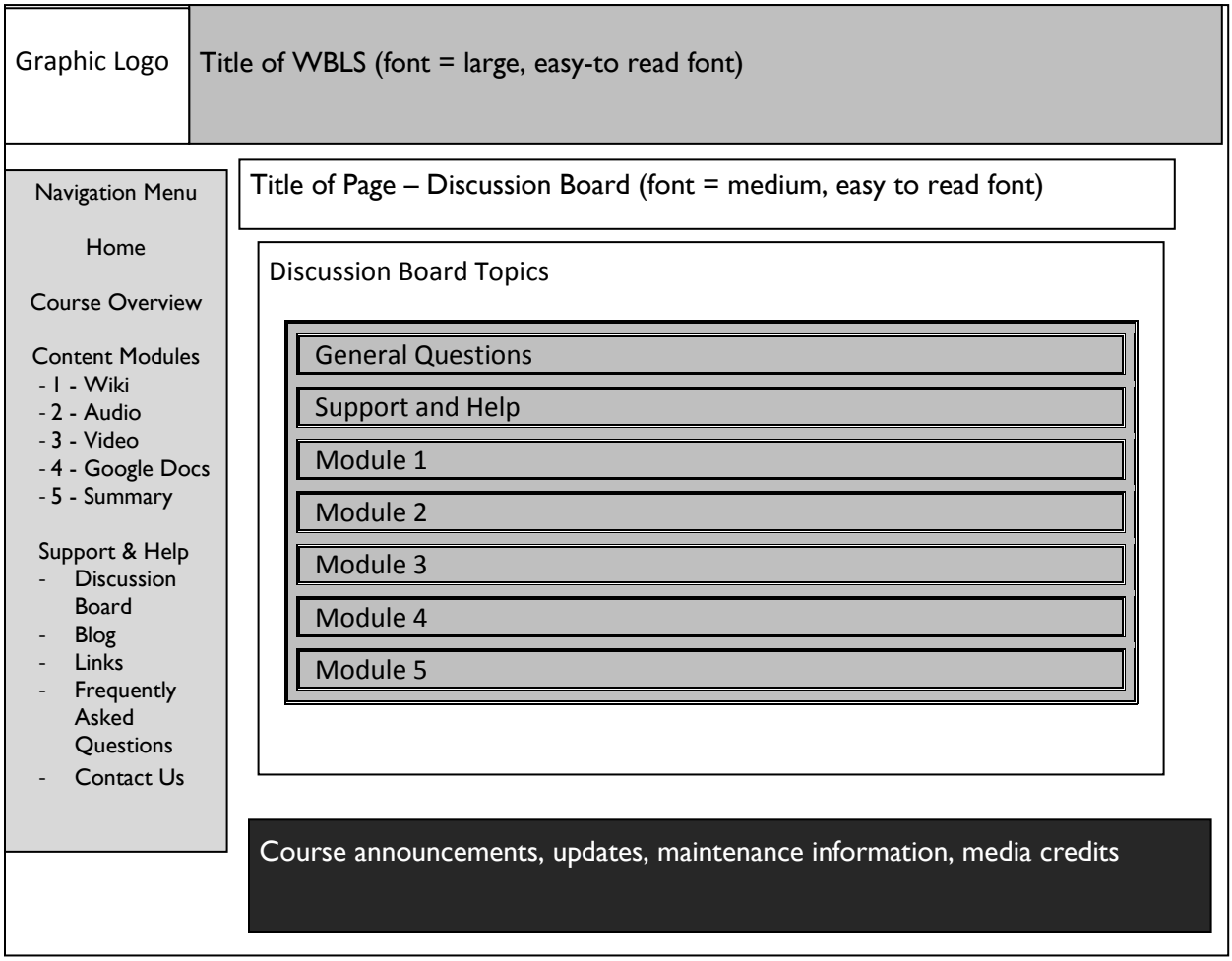
Sub Page Interface *Modules (1 through 4)*



Sub Page Interface *Modules (5)*

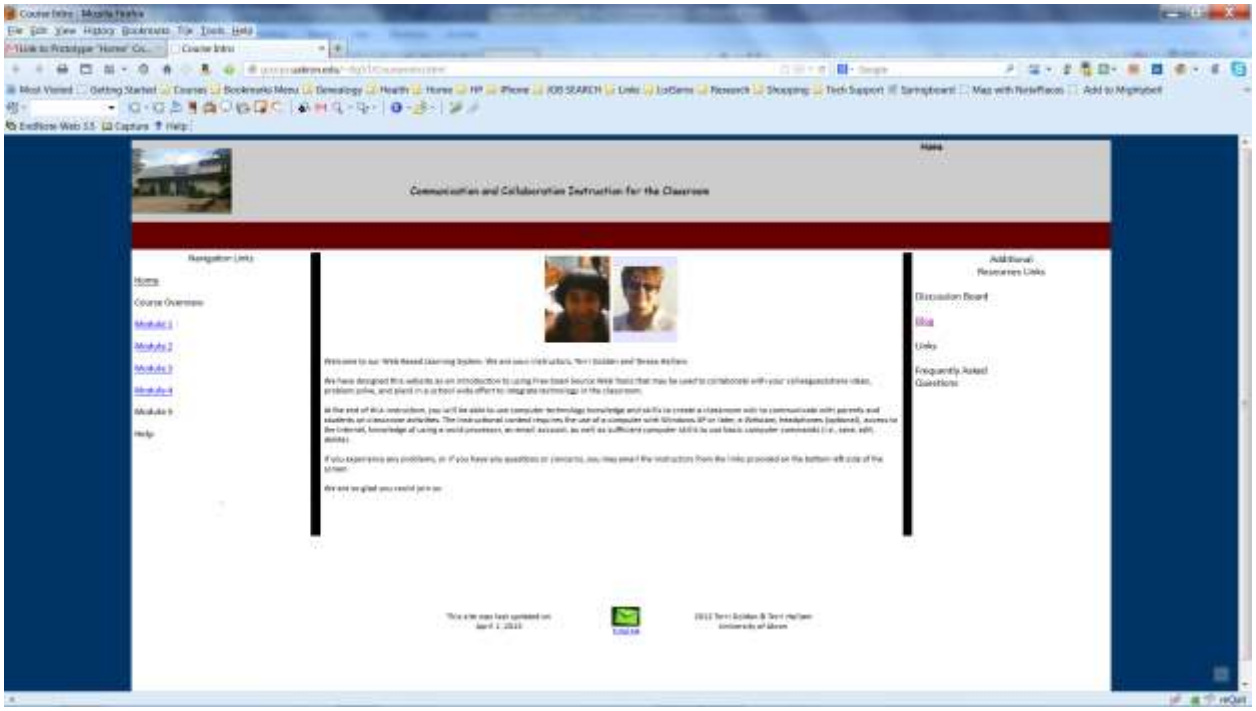


Sub Page Interface *Discussion Board*

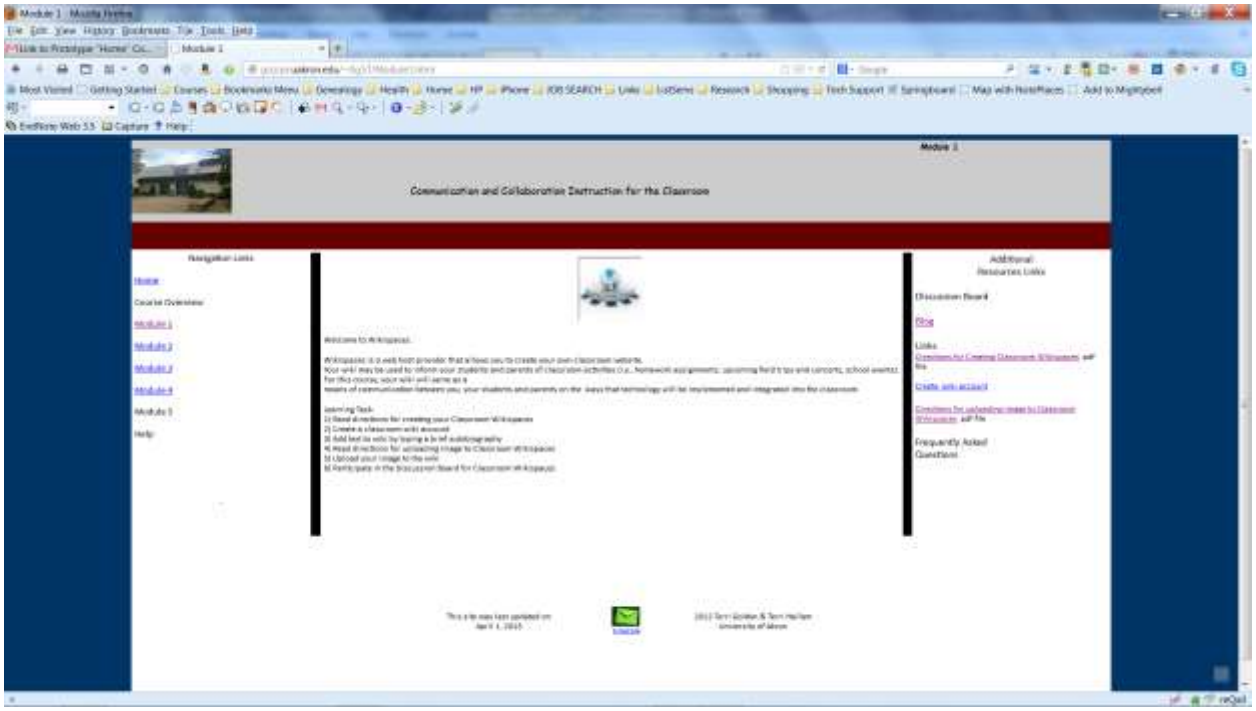
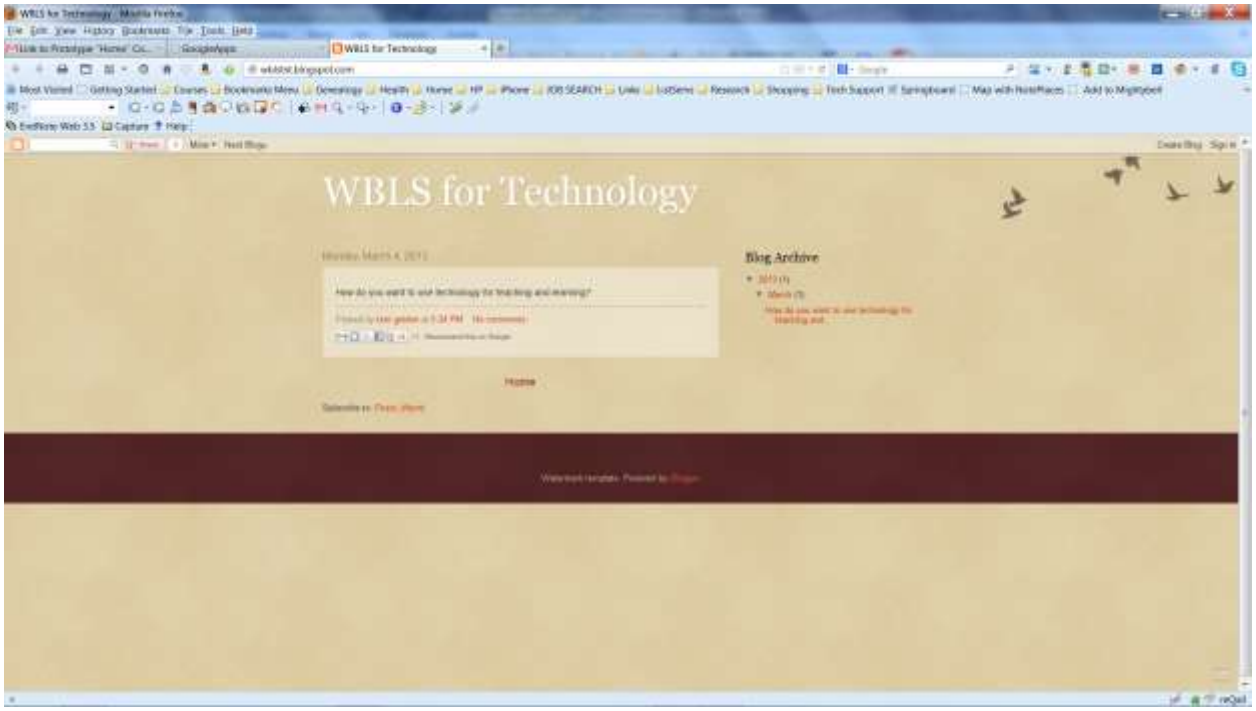


Prototypes

Main Page



Prototypes *(Module 1)* Modules 1 through 4 will be similar



Prototype *Blog*