Web Basics: HTML5 & CSS3 Workshop

Juan Primo & Ellen Twomey

Goal: A one hour workshop that will enable students in the Associates Degree program for Applied Sciences in Visual Communication to use Notepad to create a basic American with Disabilities Act (ADA) compliant web page using HTML5 for document structure and CSS3 for presentation according to W3C standards.

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Analysis

Introduction

Professionals in multimedia use Hyper Text Markup Language version 5 (HTML5) and Cascading Style Sheets version 3 (CSS3) as the current standards in industry to work with Internet-based content and the development of mobile applications (apps). The degree of use of HTML5 and CSS3 varies, depending on the specialization, but it is a desirable trait in a multimedia professional. Although multimedia degree tracks may focus on web design, graphic design, video, or animation, students pursuing an Associate of Applied Sciences (AAS) degree in a multimedia-related area require a basic understanding of HTML5 and CSS3.

A basic HTML5 document consists of the document type declaration, head, and body areas. These three areas provided a solid background for learning the syntax of HTML5. CSS3 will be used to format standard HTML5 tags in the document. CSS3 formatting provides a concrete foundation for understanding how CSS3 modifies the presentation of HTML5 documents. Because of the concepts of HTML5 and CSS3 are sequential, a one-hour session would enable the students to create a structurally sound web page with basic CSS3 formatting. The session will use completed sections as the basis for the next step.

Performance Analysis

As part of the application process for the AAS on Visual Communication programs, students must pass core skills test, which includes creating a HTML5 page with basic CSS3 formatting. The page must pass the World Wide Web Consortium (W3C) validator with zero errors.

Faculty in the web design AAS track performed a team analysis of HTML5 documents from students failing validation. The faculty report reveals that the main issues are

- Incorrect positioning of structural tags,
- Incorrect syntax (including CSS3), or
- Lack of skills required to code HTML

The faculty group recommended the development of mandatory training for students failing validation.

Instructional Goal

The one-hour workshop will enable students in the associate's degree program for Applied Sciences in Visual Communication to use Notepad to create a basic American with Disabilities Act (ADA) compliant web page using HTML5 for document structure and CSS3 for presentation according to W3C standards.

Learners, context, and tools: The context will be academic projects that require or encourage the use of HTML5 and CSS3 web pages that are ADA/W3C compliant. Future contexts will be a workplace setting in which former students can apply the aforementioned skills in their post-graduation job. The school computer lab with accompanying Notepad and browser (e.g., IE, Chrome, Firefox) software compose the necessary tool for the workshop.

Goal/Task Analysis

Main Steps in Instructional Goal

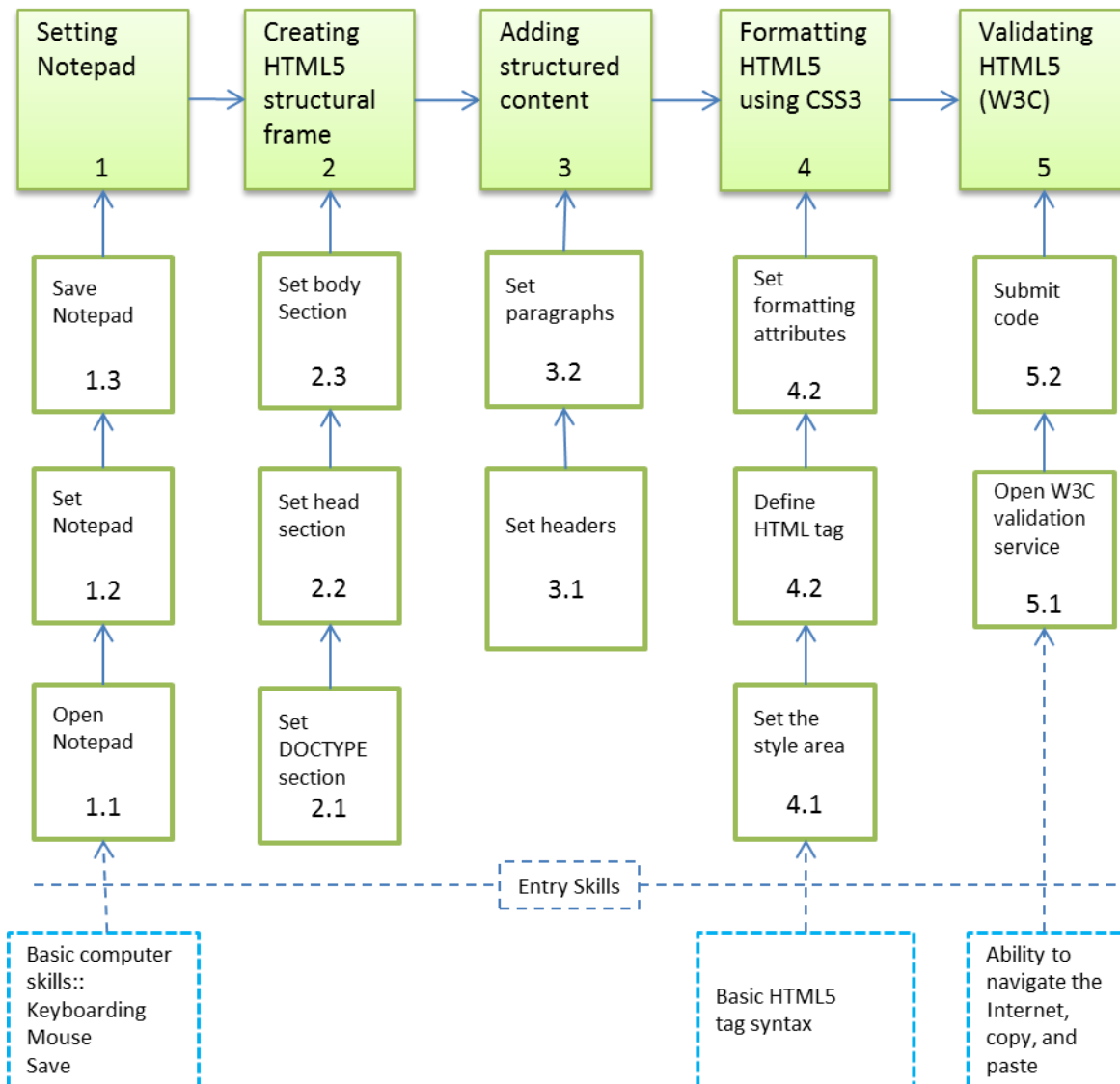| Setting Notepad	Creating HTML5 structural frame	Adding structured content	Formatting HTML5 using CSS3	Validating HTML5 (W3C)
1	2	3	4	5
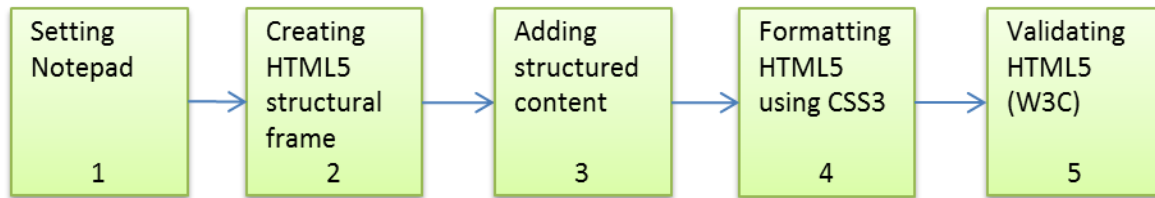
Subordinate and Entry Skills

Setting Notepad	Creating HTML5 structural frame	Adding structured content	Formatting HTML5 using CSS3	Validating HTML5 (W3C)
1	2	3	4	5

| Save Notepad 1.3 | Set body Section 2.3 | Set paragraphs 3.2 | Set formatting attributes 4.2 | Submit code 5.2 |

| Set Notepad 1.2 | Set head section 2.2 | Set headers 3.1 | Define HTML tag 4.2 | Open W3C validation service 5.1 |

| Open Notepad 1.1 | Set DOCTYPE section 2.1 | | Set the style area 4.1 | |

Entry Skills

| Basic computer skills:: Keyboarding Mouse Save | | | Basic HTML5 tag syntax | Ability to navigate the Internet, copy, and paste |

Learner Analysis

Participants in the workshop are students enrolled in an AAS in Visual Communication degree who failed to create a W3C valid HTML5 page. The typical participants include recent high-school graduates and lifelong learners acquiring new skills. All students participating in the workshop passed a required mastery test of basic computer operation and Internet navigation skills essential to coursework.

The level of familiarity with HTML5 is heterogeneous. Some of the participants have some knowledge of HTML5 or previous versions of HTML (formal and informal), and for others is a novel topic. The majority understands the practical uses of HTML, and how it relates to CSS.

Students are interested in the application of HTML5 as a practical tool in business and industry. Most of them understand HTML5 as a core component of professional skills required in visual communication and multimedia design.

Individuals in this program generally have full- or part-time employment. This employment is typically outside the field of AAS as students are using the degree to move into their field of choice. A minority of students are employed in a visual communication related area, and plan to utilize the skills they use in the program to improve their standing within their own organization. Academic motivation is significant as students in this program are looking to attain a job in the field within two years or shorter time frame so they approach learning knowing that they will be using this information in a job setting soon.

Students in the program are familiar with face-to-face guided instruction to learn technical skills. The students favor the opportunity to participate in an instructor-led session with expertise in HTML5 and CSS3.

Context Analysis

Performance Context

A focus group consisting of faculty with more than five years of experience in business and industry identified certain specific conditions common to professionals using HTML5 and CSS3 for business purposes. Professionals in visual communication use visual editors (e.g., Dreamweaver) to work with HTML5 and CSS3. However, the ability to code HTML without the aid of a visual editor is required during the employment application process because the skill is essential to fine tune software-generated code. The ability to understand HTML5 document structure and tag syntax is also valuable in environments in which Extended Markup Language (XML) is a significant part of the workflow. The value of understanding the basics of HTML5 and CSS relates to web design, programming, and presenting dynamically generated from databases. Whereas there are several text-based tools to edit HTML5, Notepad is the most readily available software (NetmarketShare, 2013), and the skills learned in Notepad are transferrable to other tools such as TextEdit or Crimson Editor.

Learning Context

The students will participate in the workshop in a computer lab equipped with 20 computers running Windows 7 as the operating system. Students will use Notepad and Internet Explorer to create, monitor, and validate their work. There are two network printers (color and black and white) available from the student's stations. The computer lab also includes a teacher station connected to a projector. The instructor can monitor and control any computer in the classroom using Vision (classroom management software). The computer lab is properly isolated from traffic and external noise and is equipped with comfortable seating and work area. There are three workstations with adjustable height available (when needed) for students requiring special accommodations.

Design

Design Evaluation Chart

Main Instructional Goal:	Terminal Objective:	Test item
The one-hour course will enable the participants to use Notepad to create a simple American with Disabilities Act (ADA) compliant web page using HTML5 for document structure and CSS3 for presentation according to the recommendations of the W3C.	Using Windows 7 and notepad, students of the introduction to multimedia course will code a simple web page using HTML5 with solid document structure and CSS3 for presentation. The web page must pass using the W3C markup validation tool.	Create an HTML5 web page (product) using basic CSS formatting that successfully passes the W3C validation tool. Printout of the W3C report with result (errors and warnings)
Main Step in Instructional Goal	Objective	Test item
1. Setting Notepad	Given access to a Windows 7 computer, students will set properly Notepad by defining the type of document, extension, and encoding for an HTML5 document. Upon completion of the objective, the page will open by default in a browser window.	Double click on the page to open it in the computer default browser window.
Subordinate Skills	Objective	Test item
1.1 Open Notepad	Given access to a Windows 7 computer, students will open Notepad by one of two methods: • Using the search feature under the start button • Using the all programs menu under the start button	Verify that a blank Notepad window is open in the screen.

1.2 Set Notepad	With Notepad open, from the Save As windows, the students will set properly the following fields in order : 1. Save as Type = All Files 2. Encoding = UTF-8 3. Use .htm or .html as the file extension Information is provided in the *Notepad: Creating an HTML Document* handout.	Compare and ensure that the following fields are an exact match to the *Notepad: Creating an HTML Document* handout. • Save as Type • Encoding • Extension (html or htm)
1.3 Save Notepad	With Notepad properly set up, students will save the document and double click the new shortcut to launch a browser window.	Visually inspect the newly created web page to ensure a blank browser window appears.
Main Step in Instructional Goal	**Objective**	**Test item**
2. Create HTML structural frame	Given a web page opened in Notepad, code a structurally sound HTML5 page. Upon completion, a blank page will display in the browser with the title showing on the window of the browser.	Visually inspect the newly created web page to ensure a blank browser window appears with title displaying in the title bar. Visually inspect the code in Notepad. Check for properly structured content (headings and paragraphs).
Subordinate Skills	**Objective**	**Test item**
2.1 Set document type (DOCTYPE) declaration	With Notepad open, properly code the DOCTYPE declaration to HTML5 so it matches the *Notepad: Creating an HTML Document* handout.	Visually inspect the code in Notepad for proper DOCTYPE declaration by comparing to the *Notepad: Creating an HTML Document* handout. Answer verbal questions regarding the reason for including these tags and information that will be contained within them.
2.2 Set Head section	With Notepad open, properly code the opening and closing HTML5 tags of the head section, including the title element so it matches the *Notepad: Creating an HTML Document* handout.	Visually inspect the code in Notepad for the proper syntax of the head section (including title) by comparing it to the *Notepad: Creating an HTML Document* handout. Answer verbal questions regarding what content belongs within these tags.

2.3 Set body section	With Notepad open, properly code the opening and closing HTML5 tags for the body element so it matches the *Notepad: Creating an HTML Document* handout. Students will identify the body section as the only place where visible content is coded.	Students will identify and articulate the body section as the only place where content is coded and displayed in the web page. The students will illustrate understanding by leaving 6 lines of blank space in the code between the opening and closing body tags.
Main Step in Instructional Goal	**Objective**	**Test item**
3. Adding structured content	Given a section of unformatted content divided into sections with titles, students will use HTML5 heading and paragraph tags to structure the content in the body area of the page. Upon completion, the page will display the content using browser defaults.	Visually inspect the document structure in the HTML5 and browser preview for: • Proper headings (levels) • Proper grouping of content in paragraphs • Correct syntax in the opening and closing tags
Subordinate skills	**Objectives**	**Test item**
3.1 Set headers	With sample content provided, students will identify the titles of the sample content and set them to h1, h2, or h3. The preview of the web page will show the different heading levels using the browser default.	Visually inspect the code and preview the document for h1, h2, and h3 heading levels according to content structure. Check for: • h1 for main title • h2 for second levels • h3 for third level content • Correct syntax for each tag
3.2 Set paragraphs	With sample content provided, students will surround the main areas of content with opening and closing paragraph tags. The preview will show the browser with the paragraphs properly divided into sections.	Students will articulate and answer questions regarding the paragraph tag defining characteristics of blocking content and adding a space after the content. Visually inspect the code and preview the document to show: • Properly blocked paragraphs • Correct syntax for the opening and closing of the paragraph tag
Main Step in Instructional Goal	**Objective**	**Test item**

4. Formatting HTML using CSS	Given an HTML5 page with sample content structured using HTML5 tags, the students will create an internal style sheet. The font size and color of headings and paragraphs will be properly formatted. Upon completion, the page will display in the browser with the newly defined text size and color.	Visually inspect student generated code and browser preview of the page with internal CSS formatting for h1, h2, h3, and paragraph tags.
Subordinate skills	Objectives	Test item
4.1 Set the Style area	Given a webpage with sample content, the students will code the opening and closing tags for internal style sheet inside the head section of the HTML5 document to match exactly the *Internal Style Sheet* section *CSS Basics* instructional presentation.	Visually inspect for: • Proper placement of the style tags inside the head section • Proper syntax for the opening and closing tag
4.2 Define Tags	Give a webpage with sample content with CSS internal style tags, the students will utilize the correct syntax within the internal style sheet to prepare to modify the h1, h2, and paragraphs of the HTML5 document to match exactly the *Internal Style Sheet* section *CSS Basics* instructional presentation.	Visually inspect for proper syntax and standard location of: • h1 { } • h2 { } • h3 { } • p{ }
4.3 Set formatting attributes	Given a web page with CSS internal style tags, the students will code different formatting attributes for font size and color for each of the h1, h2, and paragraph type of content in the HTML5 page. Upon completion, the page will be displayed using the student-defined internal style.	Visually inspect code and preview in a browser the modified heading tags according to student specifications. Example: • h1 = #00F | 18px • h2 = #090 | 16px • h3 = #999 | 14px • p = #333 | 11px
Main Step in Instructional Goal	Objective	Test item
5. Validating HTML5 (W3C)	Given a CSS supported HTML5 web page, students will validate the HTML5 and CSS code using the W3C online direct input validator service. Upon completion, the student will report the number of errors and warnings produced by the page.	Printed copy of W3C report from HTML5 code by direct input with the number of errors and warnings.
Subordinate skills	Objectives	

5.1 Open W3C Validation Service	Given an HTML5 page and the url of the W3C Validator (http://validator.w3.org/), the students will locate and open the W3C Validation service and select the "Validate by Direct Input" tab.	Accurately locate the W3C Validation service and select the "Validate by Direct Input" tab.
5.2 Submit code	Given the previously developed HTML5 web page copied to the clipboard with the W3C Validation service open and the "Validate by Direct Input" tab selected, students will copy, paste, and submit their code. Upon completion, the students will report the number of errors and warnings returned. The page will validate only if the service reports no errors.	The student will generate a printout of the W3C validator report with the number of errors and warnings.

Instructional Strategy Plan

Preinstructional Activities

Attention and Motivation

The instructor will welcome the participants to the session and perform an introduction portion of the instruction in which participants learn each other's names and course of study (there are different tracks within the AAS program). A quick informal poll on familiarity with HTML (previous versions, levels of confidence, or tools used) followed by a quick brainstorm on how HTML is used in industry aside from web design will be performed. The instructor will highlight applications (apps) development, fine-tuning of code, debugging, dynamic data manipulation (database content), and XML will be highlighted. The instructor will also encourage discussion about HTML as a preferred requirement in job descriptions in the area of professional multimedia to gain an edge in career advancement. Last, a visual sample of simple web page completed using HTML5 and CSS will be provided.

Objectives for Participants

During the session, each participant will create a properly structured web page (document declaration, header, and body) with basic CSS for formatting of headings and paragraphs. The page will pass the W3C validator without errors. The intrinsic satisfaction (Dick, Carey & Carey, 2009) that learners will gain from the workshop is the ability to create, from a blank page, a functional web page.

<u>Technical Requirements of the lab learning environment:</u>
The technical environment for the learners includes a computer lab. The availability of a projector at the front of the lab enables instructional materials to be viewable to learners while at their workstations. The workstations are equipped with Windows 7 and the Notepad software that learners will utilize within the workshop. The workstations are web enabled with the available browser being IE.

Objectives

Main Step 1: Setting Notepad

<u>Objective 1.1</u>: Opening Notepad by one of two methods:

- Using the search feature under the start button
- Using the all programs menu under the start button

<u>Objective 1.2</u>: From the Save As windows, the students will set properly in order:

1. Save as Type = All Files
2. Encoding = UTF-8
3. Use .htm or .html as the file extension

<u>Objective 1.3</u>: Students will save the document and double click on the document icon to ensure it opens in a browser window.

<u>Content Presentation</u>
The instructor will demonstrate each of the steps in the process viewable over the projector while the students follow along at their workstations. The presentation will stress the importance of selecting "All Files" to avoid assigning the .txt extension instead of .htm or .html extension.. The instructor will also demonstrate right clicking on an HTML file and selecting "edit" to open it with Notepad.
Examples: The instructor will demonstrate the process and the students can refer to the *Notepad: Creating an HTML Document* handout.
Media selection: Projection of instructor-led demonstration.

<u>Student Participation</u>
Practice Items and Activities: Students will set up Notepad following the instructor demonstration.
Feedback: The instructor will ask for student questions, perform a visual check for the browser icon of the new document to ensure it opens in a browser by default.

Main Step 2: Creating HTML5 structural frame

<u>Objective 2.1</u>: Properly code the DOCTYPE declaration in the HTML5 document.

<u>Objective 2.2</u>: Code the opening and closing HTML tags of the head section, including the title element using proper syntax.

<u>Objective 2.3</u>: Code the opening and closing tags for the body element. Students will identify the body section as the only place where visible content is displayed in a web page.

<u>Content Presentation</u>
The instructor will encourage students to share with the class the different versions of HTML. The instructor will follow up with the importance of properly declaring the type of document so the different browsers can interpret the content within the web page. The instructor will demonstrate the syntax for the DOCTYPE declaration for HTML5. The instruction will present that there is no ending tag for the DOCTYPE declaration.
Examples: The instructor will use the projector to show the DOCTYPE declaration to the students.
Media selection: Projection of instructor-led demonstrations.

<u>Student Participation</u>
Practice Items and Activities: Students will share their familiarity of HTML5 with the class. A discussion will be held regarding how different browsers read and display content differently.
Feedback: The instructor will ask for student questions and perform a quick visual check for syntax correctness of the DOCTYPE declaration.

Main Step 3: Adding structured content

<u>Objective 3.1</u>: Students will identify the hierarchical structural order of the sample content and apply the corresponding header tags (h1, h2, and h3) to the different sections.

<u>Objective 3.2</u>: Students will enclose content groups with opening and closing paragraph tags.

<u>Content Presentation</u>
The instructor will present the proper technique for coding HTML5 tags with the open-close tag approach for paired tags. The technique consists of coding the opening tag and immediately creating the closing tag for each part to avoid omitting the closing tag later. The order is:

1. Open and close HTML tag
2. Open and close head tag
3. Open and close body tag
4. Add title to the HTML5 document within the head section

This creates the basic HTML5 structure. The instructor will discuss with the students the function of each pair of tags in the document stressing the importance of coding content that needs to be displayed between the body tags of the document. The concept of separation of content focusing on the important of proper document structure based on visual appearance will be presented. The primary purpose of using heading tags to create a meaningful organizing of content (h1, h2, h3…) and proper use of blocking content with paragraph tags.
Examples: The instructor will provide two samples of content formatted in HTML5 that clearly shows the hierarchical arrangement of topics by using different level of headings. The examples can

include content where classification of content (paragraphs) is easy to organize and identify such as music (genre → band) and animals (family → genus → specie). The instructor will demonstrate how to apply one set of heading tags and one set of paragraph tags
Media selection: Projection of instructor-led demonstrations.

<u>Student Participation</u>
Practice items and activities: After discussing the instructor's examples, participants in the session will suggest topics of personal interest where content can be organized using different level headers (hobbies, areas of expertise, and others). Students will add the heading and paragraph tags to the sample document to create content structure. Students will work in pairs to check for syntax correctness
Feedback: Visual check of HTML5 code and browser display with verbal feedback on areas for improvement or positive reinforcement of demonstrated knowledge.

Main Step 4: Formatting HTML5 using CSS3

<u>Objective 4.1</u>: The students will code the opening and closing tags for and internal style sheet of the head section of the HTML5 document.

<u>Objective 4.2</u>: The students will utilize the correct syntax within the internal style sheet to prepare to modify the h1, h2, and paragraphs of the HTML5 document to match exactly the *Internal Style Sheet* section *CSS Basics* instructional presentation.

<u>Objective 4.3</u>: The students will code different formatting attributes for font size and color for each of the h1, h2, and paragraph type of content in the HTML5 document. Upon completion, the page will be displayed using the student-defined internal style.

<u>Content Presentation</u>
The instructor will lead a discussion on the topic of the importance of separation of content structure and presentation (layout and formatting). CSS will be introduced as the recommended way to modify the presentation of HTML5 documents. After the brief discussion, the instructor will lead students on creating the internal style tag and the basic syntax used to define HTML5 tags:
tag {property: value;}
Examples: The instructor will demonstrate with a completed file how changing the values inside the style tag to modify the presentation of the elements in an HTML5 document.
Media selection: Projection of Instructor-led demonstration, sample code, and *CSS Basics* instructional presentation.

<u>Student Participation</u>
Practice items and activities: Students set the internal CSS3 and formatting values for text color and size for h1, h2, h3, and paragraph tags.

Feedback: Visual check of HTML5 code and browser display with verbal feedback on areas for improvement or positive reinforcement of demonstrated knowledge.

Main Step 5: Validating HTML5 (W3C)

Objective 5.1: Given an HTML5 page and the url of the W3C Validator (http://validator.w3.org/), the students will locate and open the W3C Validation service and select the "Validate by Direct Input" tab.

Objective 5.2: Given the previously developed HTML5 web page copied to the clipboard, with the W3C Validation service open and the "Validate by Direct Input" tab selected, students will copy, paste, and submit their code with the given textbox and "Check" button. Upon completion, the students will report the number of errors and warnings returned. The page will validate only if the service reports no errors because W3C standards (which included ADA compliancy) have been met.

Content Presentation
The instructor will discuss with the class the importance of properly written HTML5 code and possible consequences of incorrect syntax and tag placement. Part of the discussion should include that in the professional environment all HTML5 code must be validated. The instructor will demonstrate the validation process and explain the difference between errors and warnings. The students will be instructed to independently:

1. Access the W3C validator service
2. Select "Validate by Direct Input" tab
3. Copy, paste, and submit the code for validation
4. Read the error and warning report

Example: The instructor will submit an invalid document to the W3C direct input validator, and use the results to fix the error. A second submission of the code will show the validated results.

Student Participation
Practice items and activities: Students will access the validation service, copy, paste, and submit the code for validation. If the validator reports errors, the students will debug their code and re-submit to the validator. When the file validates with no errors, **the student will print a report as proof of completion.**
Feedback: W3C validation report.

Development

Workshop Agenda

Date: _____

Time: _____

Location: _____

Session overview: The session is a guided one-hour workshop on creating a web page with correct HTML5 structure, use of header tags, and paragraphs. Basic CSS3 will be used for simple formatting of header and paragraph tags.

Format: The workshop will include a guided tutorial. The instructor will use the projector to demonstrate the building blocks of the web while the students follow along. Students are also encouraged to help each other by viewing and debugging code. The instructor will check progress after each topic by quick visual checks of code and browser previewing.

Instructor checklist:

- ☐ Projector properly working
- ☐ Instructor and student workstations (Windows 7 | Notepad | Browser | Internet connection)
- ☐ Instructor presentation files:
    - o Welcome and Objectives (PowerPoint)
    - o CSS Basics (PowerPoint)
- ☐ Session files accessible on student workstations
    - o Notepad: Creating an HTML Document
    - o Using TextEdit to edit HTML (Supplemental)
    - o Sample SampleText
- ☐ Printed copies of Notepad: Creating an HTML Document
- ☐ Printed copies of Rubric for HTML/CSS Workshop

Time	Topic	Presenter notes (Focus on)
3 minutes	Introductions Instructor materials: • Welcome and Objectives (PPT)	Ask participants to introduce themselves and provide information on their individual multimedia track.
2 minutes	Objectives and expectations	Specify the objectives: • Single web page

	Instructor materials: • Welcome and Objectives (PPT)	• Correct structure • Correct CSS • Required to pass W3C validation with no errors Provide learners with the opportunity to ask questions.
2 minutes	Handouts and materials information	Ensure all participants have their handouts and files loaded in the computers.
6 minutes	Setting Notepad Student Materials: • Notepad: Creating an HTML Document	Focus on: • Using Notepad (why: employment test, able to modify code, XML) • Saving before coding (to work with relative documents such as pictures, hyperlinks) • Process: Save as All Files • Correct extension (htm or html) • UTF-8 encoding (Brief explanation, invite to research for further technical details) • Quick visual check on code for all students
10 minutes	Coding HTML Document Sections	Focus on: • Code document declaration (DOCTYPE) and explain function. • Code header (and title) and explain other items that can go on the header (scripts and styles). • Code body and explain that all visible content will go between the body tags. • Stress the importance of opening and closing • Matching opening & closing tags to avoid omitting closing tag a later time. • Explain opening and closing tags. • Quick visual check on all pages.
1 minute	Previewing and editing existing pages with Notepad Student materials: • Notepad: Creating an HTML Document	Focus on: • Double clicking for previewing (opens in browser by default). • Right click to edit (any HTML document). • Demo side-by-side editing and previewing (Notepad and browser).
13 minutes	Adding content Student materials:	Focus on: • Working between body tags • Add unstructured content and preview. Stress

	• Sample SampleText.txt	that HTML ignores spaces hence the need for tags to structure content. • Instruct students to open the Sample content.txt file and copy and paste the text between the body tags • Preview unformatted content in the browser to show text as a big block • Explain separation between content and presentation (function versus appearance) • Add headers (h1, h2, and h3) • Add p tags to paragraphs • Preview document
7 minutes	CSS Basics Instructor materials: • CSS basics (PowerPoint)	Focus on: • Use of CSS to control presentation (formatting and layout). • Explain CSS syntax (Selector → Property → Value. • Define the position of the style tags. • Have students apply the CSS to their document.
4 minutes	W3C Validation	Focus on: • Finding the W3C validator. • Types of submissions (use direct input). • Reading standard warnings (encoding and • Reading errors | Instructor may choose to make an error on purpose to demonstrate debugging.
12 minutes	Student Test	Focus on: Students will create a web page with correct HTML5 structure for content (headings and paragraphs). The page will use CSS3 to format the color of the headings and paragraphs. It will be submitted to the W3C validator. Instructor will collect the pages and grade them according to the Rubric for HTML/CSS.

Workshop Materials Lists

See accompanying files in project folder

Student-centered material:

- o Notepad handout

  File name: Notepad Creating an HTML Document.pdf

- o TextEdit handout (supplemental)

  File name: TextEditHandout.pdf

- o Sample Content

  File name: SampleText.txt

Instructor-centered material:

- o HTML/CSS rubric

  File name: HTML_CSS_Rubric.docx

- o Welcome and Objectives slides

  File name: Welcome.pptx

- o CSS basics slides

  File name: CSS Basics.pptx

Implementation, Evaluation, and Revision

Implementation Report

The workshop was implemented on the campus of the target audience in the school computer lab. An overhead projector with PowerPoint, Notepad, and IE software were utilized. Learners were at individual workstations equipped with identical software. The learners were actively involved in the workshop in all phases. The learners followed an instructor led process of creating an individual web page. The workshop was offered to a small group to ascertain the areas for improvement before distributing the workshop to the larger target audience.

The small focus group utilized for implementation and review of the instruction represented a range of ages from the twenties to the fifties. The group contained both men and women so as to be representative of the target audience. Additionally, one of the learners was an AAS program member. The non-program member is a lifelong learner who needs these skills to work with learning management systems. The abilities of the small group are similar to the target audience. All learners except one have seen HTML code but may have worked with an earlier version than HTML5. The one learner not familiar with HTML does have some knowledge in java programming which is not specifically related to HTML but does provide a context of learning within a coding environment. All learners meet or exceed the entry-level skills of basic computer functionality knowledge including opening, closing, and saving files, as well as an understanding that HTML is the mark-up language utilized for web page development.

The implementation process:
The focus group was subjected to the same learning conditions that the target audience will be subjected to during the instructional process. The location of the school computer lab provides the ideal environment for testing as it will be the location for the target audience training as well as the location of future use of the extended goal of being able to design a website from scratch within web design courses. The instruction was given in person with the use an instructor computer/projector system to guide the learners through the web design process. Instruction was given at the front of the classroom as well as during walk-around checks as is crucial in a lab environment which decreases visibility of student work. Notepad software was used to demonstrate the coding process for learners. PowerPoint was used to guide learners through the implementation of CSS. IE was used to display visual modifications of the code to the web page.

Assessment Report: Learner Performance

Rubric for HTML/CSS one-hour workshop: 100 points possible

Criteria	Achievement Level			
	Achievement Level 1 (0%)	**Achievement Level 2** (30%)	**Achievement Level 3** (60%)	**Achievement Level 4** (100%)
W3C Validation	0 points Web pages not validated			50 points Page passes validation
HTML Structure	0 points More than two instances of improper use of HTML structural tags (DOCTYPE, HTML, HEAD, TITLE, STYLE, and BODY)	6 points Two HTML sections or elements missing or incorrect (DOCTYPE, HTML, HEAD, TITLE, STYLE, and BODY)	12 points One HTML section or element missing or incorrect (DOCTYPE, HTML, HEAD, TITLE, STYLE, and BODY)	20 points Clean and logical use of all HTML sections of the document (DOCTYPE, HTML, HEAD, TITLE, STYLE, and BODY)
Content Organization	0 points Three or more HTML tags missing or used incorrectly to organize content (h1, h2, h3, p)	5 points Two HTML tags missing or used incorrectly to organize content (h1, h2, h3, p)	10 points One HTML tag missing or used incorrectly to organize content (h1, h2, h3, p)	15 points All HTML tags properly used to organize content (h1, h2, h3, p)
Presentation (CSS)	0 points One or more major error(s) or two or more minor CSS formatting errors of h1 and p definitions		10 points One minor CSS formatting error (but not missing) of h1 or p definitions	15 points No errors on CSS formatting for h1 and p definitions

Rubric for Results of Evaluations of HTML/CSS one-hour workshop: 100 points possible

Criteria	Achievement Level			
	Achievement Level 1 (0%)	**Achievement Level 2** (30%)	**Achievement Level 3** (60%)	**Achievement Level 4** (100%)
W3C Validation	0% Web pages not validated			100% Page passes validation
HTML Structure	0% More than two instances of improper use of HTML structural tags (DOCTYPE, HTML, HEAD, TITLE, STYLE, and BODY)	0% Two HTML sections or elements missing or incorrect (DOCTYPE, HTML, HEAD, TITLE, STYLE, and BODY)	0% One HTML section or element missing or incorrect (DOCTYPE, HTML, HEAD, TITLE, STYLE, and BODY)	100% Clean and logical use of all HTML sections of the document (DOCTYPE, HTML, HEAD, TITLE, STYLE, and BODY)
Content Organization	0% Three or more HTML tags missing or used incorrectly to organize content (h1, h2, h3, p)	0% Two HTML tags missing or used incorrectly to organize content (h1, h2, h3, p)	0% One HTML tag missing or used incorrectly to organize content (h1, h2, h3, p)	100% All HTML tags properly used to organize content (h1, h2, h3, p)
Presentation (CSS)	0% One or more major error(s) or two or more minor CSS formatting errors of h1 and p definitions		0% One minor CSS formatting error (but not missing) of h1 or p definitions	100% No errors on CSS formatting for h1 and p definitions

The post-test rubric results reflect that 100% of the learner achieved the goal on the first trial of the post-test. This achievement level is in line with the expectation of the Instructional Designer for two reasons. First, the target audience learners cannot move forward in their degree program unless the post-test requirements are met with 100% accuracy. The second reason is that the small focus group is a subset of the target audience that represents the most advanced learners. Should any advance learners fail the post-test, significant adjustments to instruction would be required. As is the case with the anticipated successful achievement of the small focus group, only minor revisions to instruction are required.

Formative Evaluation and Revision Report

Post-instruction Formal Evaluation Results

HTML Workshop Feeback   SurveyMonkey

1. Instructor name

	Response Count
	5
answered question	5
skipped question	0

2. How would you rate the following aspects of training today

	Excellent	Good	Fair	Poor	Rating Count
Pace	80.0% (4)	20.0% (1)	0.0% (0)	0.0% (0)	5
Content level	100.0% (5)	0.0% (0)	0.0% (0)	0.0% (0)	5
Presentation	80.0% (4)	20.0% (1)	0.0% (0)	0.0% (0)	5
Instructional Materials	100.0% (5)	0.0% (0)	0.0% (0)	0.0% (0)	5
			answered question		5
			skipped question		0

3. On a scale from 1 to 10, how useful you found this workshop overall?

	1	2	3	4	5	6	7	8	9	10	Rating Averag
	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	100.0% (5)	10.0

answered questio

skipped questio

1 of 2

4. Any other comments and/or suggestions you have:	
	Response Count
	3
answered question	3
skipped question	2

The results of the post-test, the post-instruction interview, and the formal evaluation of instruction reveal that minor modifications are necessary to the instructional design of the workshop. The points for revision are as follows:

- Editing the page by using the "open with" command. Better clarification could be made to distinguish between viewing the page in a web browser compared to editing the file in Notepad.
- The screen projection could be magnified to a preset specification to provide a better visual appearance to the students.
  - o Instructor could copy and paste or do a PowerPoint with slide in animation to see each line added that builds the web page. A remote controller on the projector could be used so as to allow the instructor to walk around the room and be available for student questions.
- A workshop website could be created to improve the following areas:
  - o Paper handouts could be posted online to the workshop website specifically designed for the class.
  - o Additional materials could be on the website such as a "try it" programming window similar to the one used here: htmlgoodies.com
  - o The web site could include an upload function so that the final post-test and W3C validator results files could be directly uploaded for ease of submission by the student and evaluation by the instructor.
- A laser pointer may aid the instructor in pointing physically to the part of the screen being described.
- Directly after the description of in-page style sheets, the location of where <style> tags should be located needs to occur (within the <head> section of the web page).
- Errors were found in the description of the attributes on the CSS instructional materials. Improvements and fine turning of the CSS materials are required.
- An additional instructional material handout (or web page link) could be created with "hex color codes" so that new learners quickly could reference the information.

What worked well?

It should be noted that significant portions of the instruction worked well and must be maintained for future workshops to ensure successful achievement of learners.

- Student introductions to the class at the beginning of the session create an enhanced comfort level.
- Objectives are clearly stated in the beginning of the presentation.
- Instructor addresses concerns regarding the "newer, fancier" technology of Dreamweaver. Notepad is used to eliminate any dependence a learner may have on structured components of HTML5. Notepad provides a blank page and ensures that the learner systematically builds the page from scratch to build a solid knowledge foundation. Additionally, the strong case is made that an employer may require this task using Notepad (or similar software).
- Instructor frequently checks for questions so as to ensure learners are on pace with the speed of instruction (e.g., Open Notepad = > check for questions).
- Instructor walks the room to ensure learner understanding.
- Instructor used car analogy to describe the properties of the CSS style selectors so as to draw on previous mental models of learners.
- The descriptions of style sheets provide an overview of the power of using style sheets. However, the instruction focuses on the way in which the in-page style sheet will work to simplify a complex topic.

Appendix

Terms:

ADA: American Disabilities Act

W3C: World Wide Web Consortium

HTML: Hyper-text Mark-up Language (5 indicates the most recent version of the HTML standard)

CSS: Cascading Style Sheets (3 indicates the most recent version of the CSS standard)

AAS(VC): Associates in Applied Sciences (in Visual Communication)

Resources:

W3C Validator: http://validator.w3.org/

HTML Goodies: http://www.htmlgoodies.com

Survey Monkey: http://surveymonkey.com

References:

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Walter, D., Carey, L., & Carey, J. O. (2009). *The Systematic Design of Instruction* (7th ed.). Upper Saddle River, NJ: Pearson.