

Digital Citizenship Web-Based Learning System

<https://sites.google.com/zips.uakron.edu/digital-citizenship-fab-five/contact>

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Design Document

A. Background Information:

For our design project, Team Fab Five will create a Digital Citizenship WBLS. The Digital Citizenship WBLS will be for students in grades 6-8. Within the WBLS, the content will be divided into three parts: Privacy and Security, Digital Footprint and Cyberbullying.

Privacy and Security will focus on teaching students how to keep their private information secure. Since students in grades 6-8 typically get access to a personal device, as well as spend more time on technology during the school day, they need to know what personally identifying information needs to be kept private. Additionally, the topic of identity theft will be introduced.

Digital Footprint will ensure students understand the fact that every photo, comment, and post they share can be searched, shared and traced. As middle schoolers begin participating in social media, we want them to have the knowledge and confidence to participate safely.

Cyberbullying will make sure students understand the term, as well as the consequences of participating in and/or being the target of cyberbullying. Our WBLS will focus on kind and respectful online communication and how students can become upstanders in their school and online communities.

The following International Society for Technology (ISTE) Student Standards apply to our Digital Citizenship WBLS:

2. Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical.

- 2a. Students cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.
- 2b. Students engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.
- 2d. Students manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online.

B. Problem Analysis:

Actuals	Problem (Gap)	Optimals
Many schools do not have a dedicated technology teacher or professional librarian to teach digital citizenship skills.	Many students do not receive any digital citizenship instruction.	Teachers and students will utilize the WBLS to ensure students can interact safely and respectfully online.
Classrooms teachers lack training and time to teach students necessary digital citizenship skills.	Classroom teachers do not teach digital citizenship skills.	Teachers will have the WBLS as a resource to direct student learning.
Teachers do not know where to go for digital citizenship resources.	There is not an organized curriculum for teachers and students to access digital citizenship resources.	The WBLS will provide teachers with resources to successfully implement digital citizenship instruction.
Students spend between 6-9 hours a day on screens. James, C., Weinstein, E., & Mendoza, K. (2019). Teaching digital citizens in today's world: Research and insights behind the Common Sense K–12 Digital Citizenship Curriculum. San Francisco, CA: Common Sense Media.	Students do not have the knowledge and experience to navigate the online world safely and responsibly.	Students will learn how to manage and safeguard their online presence through completion of the WBLS.

A WBLS is the most appropriate way to solve our identified problems because it will give teachers and students access to essential curriculum they are currently not receiving. Teachers can use the WBLS when and where it fits into their curriculum. Using a WBLS, as opposed to other instructional methods will allow students to learn how to appropriately function online while actually interacting online. Additionally, there are many engaging online resources from a variety of websites already available.

This content is best delivered through a WBLS since for couple reasons. First, the teachers in the classroom struggle to come up with content for lessons like this. The second is this helps the students have practice online communicating with other students. This system has several discussion forums built in where they will practice the things they are learning. We feel it's always best to put the students in the environment where they can practice what they have learned.

C. Instructional Situation Analysis:**Learning Goal & Outcome Level**

After completing the interactive lessons and assessments on the online Digital Citizenship WBLS students in 6th-8th grade will have the knowledge they need to become responsible digital citizens. They will be able to identify what information should be kept private for security purposes, identify and describe identity theft, state what a digital footprint is and list items that are part of it, identify what cyberbullying is and explain the consequences of participating in and/or being the target of cyberbullying and demonstrate respectful online communication.

This goal uses Gagne's Categories of Learning. It should be noted that some of the learning objectives also use verbiage from Bloom's Taxonomy to provide a more detailed objective. The verbs are identified below in the column labeled Capability Verb.

Category of Learning	Capability Verb	Explanation
Concrete Concepts	Gange - Identify	Identify what information should be kept private for security purposes.
Concrete Concepts	Gange - Identify Bloom - Describe	Identify and describe identity theft.
Verbal Information	Gange - State Bloom - List	State what a digital footprint is and list what items are part of it.
Concrete Concepts	Gange - Identify Bloom - Explain	Identify what cyberbullying is and explain the consequences of participating in and/or being the target of cyberbullying.
Higher-order rules or problem solving	Gange - Generate Bloom - Demonstrate	Demonstrate respectful online communication.

No prior knowledge will be required of these students. The lessons will be developed to teach them the foundations they need to know on the topics.

Learner Analysis

The Digital Citizenship WBLS will be designed for students in grades 6th-8th. Their average age range is 11 to 14 years old. The learners will be both male and female students who come from a variety of backgrounds. These students are using technology for an estimated 6-9 hours a day. They have grown up with technology and tend to be comfortable typing on a keyboard. They are familiar with navigating the web, looking at lessons that teachers advise them to review, watching videos on YouTube, uploading pictures and communicating through email, class discussions and social media.

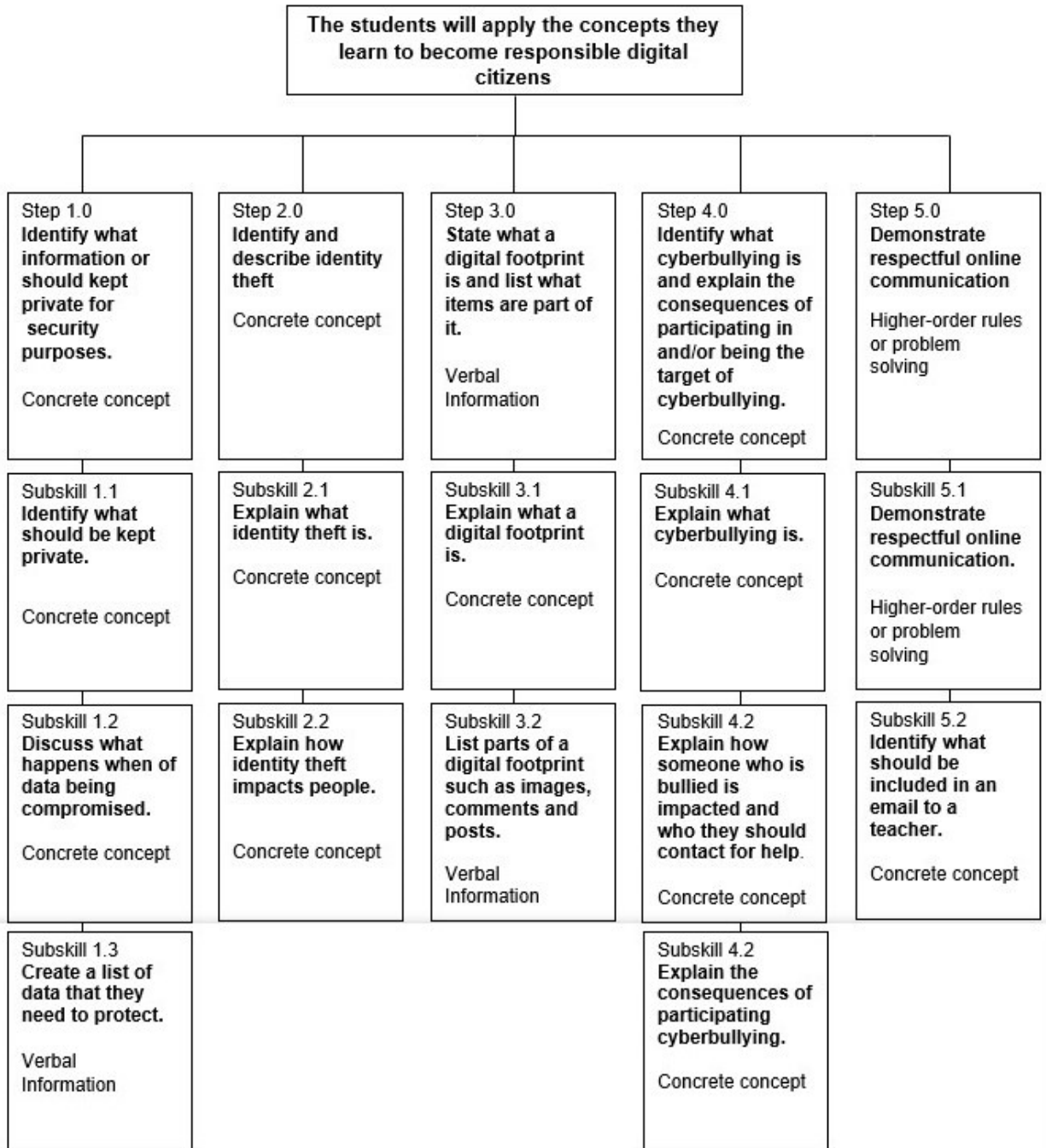
Since we are designing for a wide variety of students, it's critical we keep disabilities and learning styles in mind. As we develop this system, we have no concrete way of knowing what disabilities our learners may have. In order to meet ADA standards and ensure everyone has equal access, we will make sure all materials are ADA compliant. This includes creating alt tags for any images used, making sure all videos included have closed captions and that all documents are accessible. It's difficult to get concrete data of what learning styles these students have since we are developing this system for any school that wants to take advantage of these resources. To ensure we are meeting the needs of these students, the lessons will be provided in various formats including videos, written lessons and tutorials the students can follow along with.

Instructional Content Analysis

1) Skills/concepts learners must perform/learn to achieve the instructional goal;

- Comprehend what they have read or watched
- Be able to navigate the internet
- Identify information that needs to be kept private such as passwords
- Effectively communicate online with others via email and discussion boards
- Have a general understanding of how Google applications work such as Google Docs and Google Sheets

2) Learning Task Map (LTM)



Evaluation Plan

A. Formative Evaluation Plan

a. General Evaluation Information:

The purpose of the formative evaluation plan for our Web-Based Learning System (WBLS) is to analyze the effectiveness of the product during the design and development phase to ensure it is meeting the learning levels of 6th-8th grade students. Within the WBLS, the content will be divided into three parts: Privacy and Security, Digital Footprint and Cyberbullying. The primary stakeholders include the instructional designers Jessica Aubley, Valerie Coughlin, Joellen Denk, Katie Lovick and Allison Nagle, as well as the middle school students participating in the Digital Citizenship WBLS. Secondary stakeholders include other middle school teachers who will be implementing the WBLS with their students.

We plan to use at least three one-to-one tryouts with middle school students. These tryouts will ensure the material is understandable and meeting the needs of the intended users. Based on the tryouts we will make any needed instructional changes. The timeline for these tryouts will be as soon as our instructional modules are complete enough to get student feedback.

In addition to the students, we will also rely on experts to review our WBLS. We will share our WBLS with the content experts and web design experts. The content experts are both Middle School teachers. Our first content expert is Christine Leonard, she has taught middle school science for 15 years. Our second expert is Kelsey Erickson. She has taught middle school language arts for 6 years. Our web design experts will be Linda Morosko, Director for eStarkState. She has worked in online learning since June of 2007 and has a teaching background. Our second web expert will be Patti Brown has worked for eStarkState since May 2011 and works with faculty to create courses. We feel these experts all have experience that will allow them to provide us with detailed feedback. Each expert will have a meeting with a member of our team to advise them on the foundation of the project. They will then receive an email with a link to our WBLS. This email will include specific survey questions they are to answer. This will ensure that they stay on target for the evaluations.

b. Materials

Design Plans	Learning Objectives Assessments Content Materials Instructional Strategies Motivational Strategies
Prototype and Website	Interface Navigation

c. Table of Types of Methods and Tools for Formative Evaluation

Evaluation Criteria	Sample Questions	Methods and Tools
Effectiveness		
Goals	<ul style="list-style-type: none"> ● Is the goal accurate? ● Are the goals and objectives achievable? ● Are the goals and objectives clear? 	Expert Review Surveys Users Extant Data
Content	<ul style="list-style-type: none"> ● Is the information complete, covering the content properly? ● Do the activities promote learning? ● Do the instructional activities promote thoughtful and reflective responses or discussions? 	Expert reviews Extant data Surveys End-user review
Technology	<ul style="list-style-type: none"> ● Do the technology applications function properly? ● Were materials easy to access by students? 	Expert Review End-user review Observation

Message Design	<ul style="list-style-type: none"> Do supporting graphics and features enhance the learning and are they without distractions? Are directions clear? Was the time frame of the course appropriate? 	Expert Review Survey End-user review
Efficiency		
Goals	<ul style="list-style-type: none"> Are the goals stated clearly and concisely? Is the purpose stated clearly and concisely? Is there congruence between the instructional goals and content? 	Expert review Surveys End-user review
Content	<ul style="list-style-type: none"> Is the content information clearly and concisely presented? Is it timely and up to date? 	Expert review End-user review
Technology	<ul style="list-style-type: none"> Is access to the instructor or other learners provided? Is the website structured appropriately? Do the technology applications function easily and efficiently? 	End-user review Expert review
Message Design	<ul style="list-style-type: none"> Is the organization and structure of the message coherent? Are there titles and subtitles to organize the content? 	Expert review End-user review
Appeal		
Goals	<ul style="list-style-type: none"> Are goals relevant to learners? 	End-user survey
Content	<ul style="list-style-type: none"> Is the content interesting? 	End-user survey
Technology	<ul style="list-style-type: none"> Any typographical, spelling, grammar, punctuation errors? 	Expert review

	<ul style="list-style-type: none"> • Is navigation easy? 	Observation
Message Design	<ul style="list-style-type: none"> • Is the vocabulary level and tone appropriate for the content and audience? • Do supporting graphics and features enhance learning without distractions? • Does it have good navigational design? Are the icons easy to use and clear as to their meaning? 	Expert review End-user survey Observation

B. Preliminary Summative Evaluation Plan

a. General Evaluation Information:

The purpose of our chosen Web-Based Learning System (WBLS) is to evaluate how effectively our lessons and culminating activity were and to see if our objectives were met. This summative evaluation will take place after the first class completion of the WBLS. We will utilize student surveys, teacher observations, and teacher questionnaires. The students and classroom teachers will help provide us with data through these surveys.

b. Materials

Materials to be Examined
Design Plans/Objectives
<ul style="list-style-type: none"> ● Objectives aligned with ISTE Standards ● Instructional Strategies ● Learning goal and outcome aligned
Content
<ul style="list-style-type: none"> ● Is student growth measurable? ● Is there a need for reteaching? ● Is the technology used appropriate for this content?
Technology
<ul style="list-style-type: none"> ● Google Forms ● Google Sites ● Activities that were used

c. Table of Preliminary Planning for Summative Evaluation:

Evaluation Criteria	Main Questions	Data Sources
Effectiveness	<ul style="list-style-type: none"> ● Did the final project meet the course objective? ● Are the goals achievable? ● Did students find lessons and outcome worthwhile? 	<ul style="list-style-type: none"> ● Student surveys ● Observations ● Student work samples
Efficiency	<ul style="list-style-type: none"> ● Is navigation easy? Are the goals stated clearly and concisely? ● Are directions clear and concise? 	<ul style="list-style-type: none"> ● Student work samples ● Student surveys ● Observations
Appeal	<ul style="list-style-type: none"> ● Is the content engaging? ● Does it have good navigation design? 	<ul style="list-style-type: none"> ● Student surveys ● Student observations

Instructional Strategy Plan

Orientation to Learning:

Item Addressed	Instructional Strategies
<p>1. Provide an overview</p>	<p>The homepage of our WBLS will introduce our middle school learners (grades 6-8) to the concept of digital citizenship through engaging and informative content, including video, images and text. Students will gain an understanding of the overall goal of the WBLS, that students will apply the concepts they learn to become responsible digital citizens.</p> <p>There will be a brief overview of the three main lessons/modules that will give students an idea of what each lesson will cover, tells them what to do for the lesson and a list of assessments they must complete.</p> <p>The three main lessons/modules we will cover in the Digital Citizenship WBLS are privacy and security, digital footprint and cyberbullying.</p>
<p>2. State the objectives</p>	<p>Learning objective(s) will be listed on our homepage, so the middle school students have an understanding of they are expected to learn from each lesson.</p> <ol style="list-style-type: none"> 1. Identify what information should be kept private for security purposes. 2. Identify and describe identity theft. 3. State what a digital footprint is and list what items are part of it. 4. Identify what cyberbullying is and explain the consequences of participating in and/or being the target of cyberbullying. 5. Demonstrate respectful online communication.

3. Explain the relevance of instruction	<p>Each lesson will include real world examples to help the student develop a better understanding of the topic. These examples will include videos and case studies.</p> <p>Example: For cyberbullying, a video with a student talking about how she was bullied would be included (https://www.youtube.com/watch?v=qA1TJjJgdz8).</p>
4. Assist learner in recall of prior knowledge, skills and experiences	<p>For each lesson, the student will be asked to list any experiences they have had for the topic. This will be a self-reflection that they keep private, not a graded activity.</p>
5. Provide directions on how to start, navigate, and proceed through the unit of instruction.	<p>Each lesson will have a page that shows the students how to navigate the WBLS. It will be the same page in each lesson. The goal is for them to have a reference of how the system works and what to do. There will be links to videos and written tutorials on using different components such as quizzes and discussions.</p>

Instruction on the Content:

Item Addressed	Instructional Strategies
1. Present instructional content	<p>Each lesson will be designed so students can move through the lesson in a natural order. The goal is for them to review all materials before they complete their assignments.</p> <p>This order will be:</p> <ol style="list-style-type: none"> 1. Overview of lesson and learning objective 2. Review of subject matter learning materials <ul style="list-style-type: none"> ● Short text and video lectures ● Real world examples ● Links to other resources 3. Assessment on student learning
2. Provide Learning cues	<p>Each lesson will have a video interview or image that shows a real world example of what is being covered. The goal is for them to start identifying this information when they are online.</p> <p>Some lessons will contain case study assessments where the student has to identify what the user has done wrong.</p> <p>Some lessons will include discussion components, so students can practice verbalizing their learning, as well as responding to other opinions.</p> <p>Some lessons will provide students an opportunity to personalize their learning by asking them to present what they have learned.</p>
3. Present opportunities of practice	<p>There will be discussions used throughout the course where students provide their opinions and examples of some of the key topics that are being covered.</p> <p>There are also two projects where</p>

	students can work together to brainstorm and create their final product. This would be the video presentation for the digital footprint lesson and cyberbullying presentation/website.
4. Provide feedback and practice performance	Instructor will provide feedback to the students on the discussion and feedback on all submitted work to ensure students understand the good aspects and areas of improvement on their submissions.
5. Provide review of and close the unit of instruction	Each lesson will end with a quick summary of what has been covered. When possible, visuals or video will be used to create this summary. The goal is to give students a quick closing for the lesson and ensure they take away the key points.

Measurement of Learning:

Item Addressed	Instructional Strategies
1. Assess performance	<p>The goal is to provide a variety of authentic assessments that help the students learn the subject matter. Each assessment will be developed around the lesson learning objective.</p> <p>Planned assessments include:</p> <ul style="list-style-type: none"> ● Quizzes with essay questions ● Discussion boards ● Submitted assignments <ul style="list-style-type: none"> ○ Written assignments ○ Case studies where the student answers questions ● A video presentation ● A creative project
2. Advise learner of performance scores	<p>Transparency for scoring is important so students understand what is expected for each assignment.</p> <p>Discussion boards, submitted assignments, the video presentation and creative project will include rubrics.</p> <p>Students will also have access to their grades so they can understand how they are doing on the lessons. This will be handled through a gradebook program (actual program TBD).</p>

Summary and Close:

Item Addressed	Instructional Strategies
1. Enhance and enrich learning	After the user completes all the lessons, there will be a conclusion alerting them they have completed the course. This conclusion will include a highlight of the goal, that they should take what they have learned and become good digital citizens. It will also state the learning objectives and how they should apply them.
2. Provide remediation for unmet objectives	The conclusion will encourage students to review any lessons they believe they do not understand and email their teacher if they have additional questions.
3. Provide opportunities for retention	Learners will be encouraged to take what they have learned and apply it to their online interactions including those at school and personal interactions such as social media.

Task Analysis Report

Initial Task List

When using the Digital Citizenship WBLS, *learners should know how to:*

Access the System/Navigate the WBLS
<ul style="list-style-type: none"> ● Use Gmail account to log into Google Sites ● Locate the WBLS ● Navigate the site to locate content such as the orientation and module lessons which include the materials and assignments ● Contact Instructor via email ● Navigate to the grades area
Orientation/Introduction
<ul style="list-style-type: none"> ● Locate the Orientation/Introduction Module ● Use the play and pause features on videos ● Adjust volume on videos ● Turn on and off closed captioning ● Open pdf documents
Learning Modules - Materials
<ul style="list-style-type: none"> ● Locate the Materials ● Use the play and pause features on videos ● Adjust volume on videos ● Turn on and off closed captioning ● Open pdf documents ● Use screen reader software if needed
Learning Modules - Assessments
<ul style="list-style-type: none"> ● Locate the discussion board ● Post and respond on the discussion board ● Locate each module assignment ● Create a google site ● Create a video ● Upload videos to YouTube ● Create and type in Google Forms ● Create and type in Google Docs or Microsoft Word ● Complete a quiz with multiple choice and essay questions ● Upload an assignment

Prioritized Task List

- Core Functionality ■ Important Functionality ♦ Nice to Have Functionality

Access the System/Navigate the WBLS
<ul style="list-style-type: none"> • Use Gmail account to log into Google Sites • Locate the WBLS • Navigate the site to locate content such as the orientation and module lessons which include the materials and assignments ■ Contact Instructor via email ■ Navigate to the grades area
Orientation/Introduction
<ul style="list-style-type: none"> • Locate the Orientation/Introduction Module • Use the play and pause features on videos • Open pdf documents ■ Adjust volume on videos ♦ Turn on and off closed captioning
Learning Modules - Materials
<ul style="list-style-type: none"> • Locate the Materials • Use the play and pause features on videos • Open pdf documents ■ Adjust volume on videos ♦ Turn on and off closed captioning ♦ Use screen reader software if needed
Learning Modules - Assessments
<ul style="list-style-type: none"> • Locate the discussion board • Post and respond on the discussion board • Locate each module assignment • Create a google site • Create a video • Upload videos to YouTube • Create and type in Google Forms • Create and type in Google Docs or Microsoft Word • Complete a quiz with multiple choice and essay questions • Upload an assignment

Function Requirements List

When using the Digital Citizenship WBLS, *learners should have the ability to:*

Access the System/Navigate the WBLS	
Task	Function Requirement
Use Gmail account to log into Google Sites	<ul style="list-style-type: none"> • Ability to access a computer with good internet access • Ability to enter Gmail sign-in information
Locate the WBLS	<ul style="list-style-type: none"> • Ability to click a valid URL
Navigate the site to locate content such as the orientation and module lessons which include the materials and assignments	<ul style="list-style-type: none"> • Ability to use a mouse to navigate around the system • Ability to click on orientation and module lesson • Ability to open materials and assignments • Ability to review materials and documents
Contact Instructor via email	<ul style="list-style-type: none"> • Ability to create and type a message to the instructor • Ability to read messages received from the instructor
Navigate to the grades area	<ul style="list-style-type: none"> • Ability to click on grades area of WBLS • Ability to review grades
Orientation/Introduction	
Task	Function Requirement
Locate the Orientation/Introduction Module	<ul style="list-style-type: none"> • Ability to open the Orientation/Introduction Module • Ability to review documents in the folder. • Ability to download documents in the folder.
Use the play and pause features on	<ul style="list-style-type: none"> • Ability to click the play and pause icons on the video player

videos	
Adjust volume on videos	<ul style="list-style-type: none"> • Ability to locate and adjust the volume button on the video player
Turn on and off closed caption	<ul style="list-style-type: none"> • Ability to locate and click the closed captioning option on the video player
Open pdf documents	<ul style="list-style-type: none"> • Ability to open documents on their computer • Ability to save documents on their computer
Learning Modules - Materials	
Task	Function Requirement
Locate the Materials	<ul style="list-style-type: none"> • Ability to open and read the learning module overview and learning objective(s) • Ability to locate and read materials listed in the module
Use the play and pause features on videos	<ul style="list-style-type: none"> • Ability to locate and click play and pause icons on the video player
Adjust volume on videos	<ul style="list-style-type: none"> • Ability to locate and click the volume button on the video player
Turn on and off closed	<ul style="list-style-type: none"> • Ability to locate and click the closed captioning option on the video player
Open pdf documents	<ul style="list-style-type: none"> • Ability to open documents on their computer • Ability to save documents on their computer
Use screen reader software if needed	<ul style="list-style-type: none"> • Ability to open and use screen reader software that is stored on their computer

Learning Modules - Assessments	
Task	Function Requirement
Locate the discussion board	<ul style="list-style-type: none"> • Ability to access Padlet with Google email
Post and respond on the discussion board	<ul style="list-style-type: none"> • Ability to understand how posting on Padlet works • Ability to use the various tools on Padlet
Locate each module assignment	<ul style="list-style-type: none"> • Ability to click on a hyperlink to access the assignment
Create a Google Site	<ul style="list-style-type: none"> • Ability to access Google Sites using their Google email address • Ability to understand how to create a Google Site
Create a video	<ul style="list-style-type: none"> • Ability to access Free Cam (iSpring) video software • Ability to access a microphone • Ability to understand how the software works
Upload videos to YouTube	<ul style="list-style-type: none"> • Ability to create a YouTube Account using Google email • Ability to understand how to upload a video
Create and type in Google Forms	<ul style="list-style-type: none"> • Ability to access Google Forms using Google email • Ability to understand how to use Google Forms
Create and type in Google Docs or Microsoft Word	<ul style="list-style-type: none"> • Ability to access Google Docs using Google email • Ability to understand how to use Google Docs
Complete a quiz with multiple choice and essay questions	<ul style="list-style-type: none"> • Ability to access Google Forms using Google email • Ability to understand how to use Google Forms

Upload an assignment	<ul style="list-style-type: none">• Ability to access Google Forms using Google email• Ability to understand how to use Google Forms
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Prioritized Function Requirements List

- Core Functionality ■ Important Functionality ◆ Nice to Have Functionality

Access the System/Navigate the WBLS

- Ability to access a computer with good internet access
- Ability to enter Gmail sign-in information
- Ability to access a valid URL
- Ability to use a mouse to navigate around the system
- Ability to click on orientation and module lesson
- Ability to open materials and assignments
- Ability to review materials and documents
- Ability to create and type a message to the instructor
- Ability to read messages received from the instructor
- Ability to click on grades area of WBLS
- Ability to review grades

Orientation/Introduction

- Ability to open the Orientation/Introduction Module
- Ability to review documents in the folder.
- Ability to download documents in the folder.
- Ability to open and click on the play and pause icons on the video player
- Ability to open and click on the volume button on the video player
- Ability to open documents to their computer
- Ability to open and click on the closed captioning option on the video player
- Ability to save documents on their computer

Learning Modules - Materials

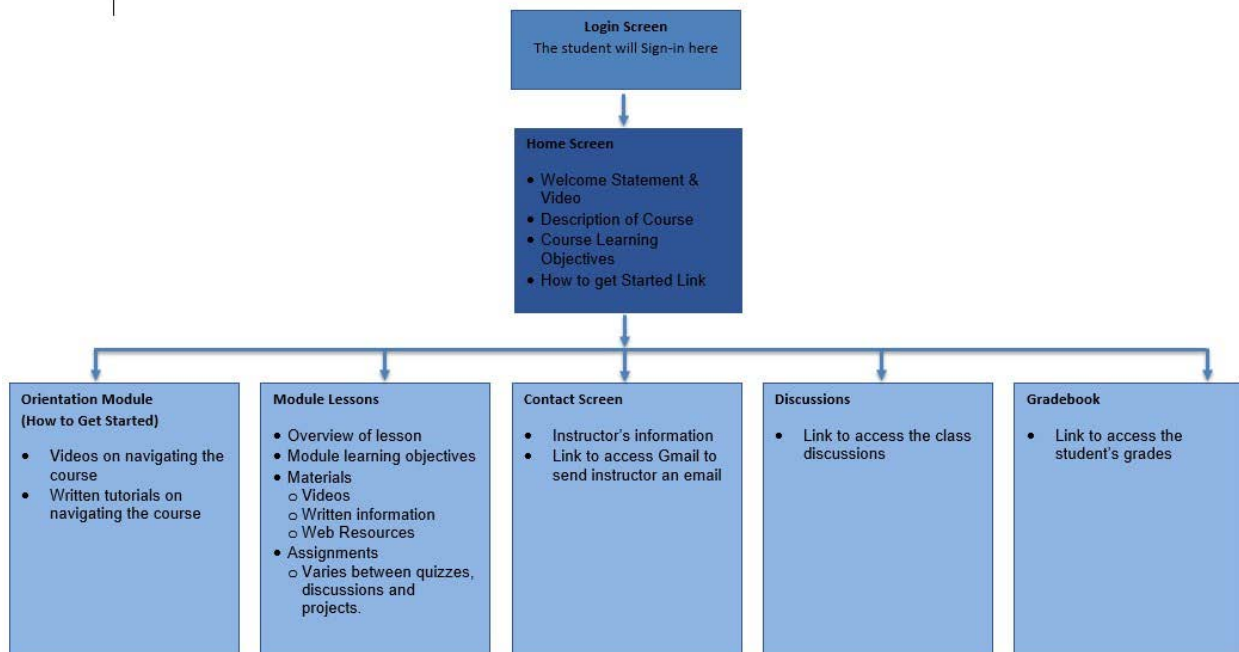
- Ability to open and read the learning module overview and learning objective(s)
- Ability to open and read materials listed in the module
- Ability to open and click on the play and pause icons on the video player
- Ability to open and click on the volume button on the video player

- Ability to open documents to their computer
- Ability to open and click on the closed captioning option on the video player
- Ability to save documents on their computer
- ❖ Ability to access and use screen reader software that is stored on their computer

Learning Modules - Assessments

- Ability to access Padlet with Google email
- Ability to understand how posting on Padlet works
- Ability to use the various tools on Padlet
- Ability to click on a hyperlink to access the assignment
- Ability to access Google Sites using their Google email address
- Ability to understand how to create a Google Site
- Ability to access Free Cam (iSpring) video software
- Ability to access a microphone
- Ability to understand how the software works
- Ability to create a YouTube Account using Google email
- Ability to understand how to upload a video
- Ability to access Google Docs using Google email
- Ability to understand how to use Google Docs

Task Flow Diagram



The course navigation will be accessible on every screen of the WBLS. Users will be able to choose the orientation, specific modules, the contact screen and the gradebook.

Scenarios

A scenario is a way to represent the structure of tasks and work. Scenarios are narrative descriptions of activities....they are stories of use. Here is an example of a scenario for getting up in the morning. 1. Does it have enough detail or another designer to understand what the user is doing? 2. Could you act out the scenario? Is it realistic and helpful for seeing how users might use the WBLS to achieve the objective?

For scenario 1, envision a student who is in a hurry and wanting to be as efficient as possible in an individual learning task.

Ben is a seventh grade student who is actively involved in extracurricular activities both at school and outside of school. He is an honor student with parents who both work. He is one of four children and the second oldest. His parents encourage him to keep up with his studies and tell him to take advantage of any free time he has after school to complete his work. He usually has to watch his little sister before his parents get home from work and before he goes to his sports practice.

After Ben gets home from school, he sits down at his kitchen table and opens up his Chromebook. He logs into his Gmail account in order to access the school's LMS. He clicks on the correct class and locates the link to the Digital Citizenship WBLS his teacher added earlier today. He waits for the WBLS to load. He is greeted by the Orientation/introduction page. He reads the brief overview of the three main modules in order to get an idea of what each lesson will cover. He learns that the three modules are privacy and security, digital footprint and cyberbullying. Next, Ben quickly skims the lesson objectives. He finally clicks on module one to get started. He reads a short introduction on privacy and security before clicking on the video underneath. One minute into the video, Ben looks at the clock and sees that his sister will be home soon. He pauses the video and walks to the end of his street to get his little sister off the bus. He comes back and continues watching the rest of the video. The movie ends and he selects another reading about security. After reviewing the readings and videos, he clicks on some of the additional web resources.

After about ten minutes of reviewing some of the information, Ben returns to the module one page. He scrolls down the page and reads the instructions for the module one discussion board. He learns he must make one post and comment on two of his classmate's posts. He goes to make his initial post on the discussion board but realizes he wants to insert a quote from one of the resources. He right clicks and opens a new tab to access an article. He decides to wait until tomorrow to comment on two of his classmate's posts. He reaches the end of the module and sees that he needs to take a quiz in order to demonstrate what he has learned about online privacy and security. Right before he starts the quiz, his mother comes home and reminds him to start getting ready for soccer practice. He closes the WBLS window and shuts his Chromebook. Ben is satisfied with the work he was able to complete before his practice and decides he will take the quiz later after he gets home from practice. The WBLS allows Ben to

complete his work at his convenience and work around his hectic schedule. He is still able to interact with his classmates and access the content materials as much as he needs.

For 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.

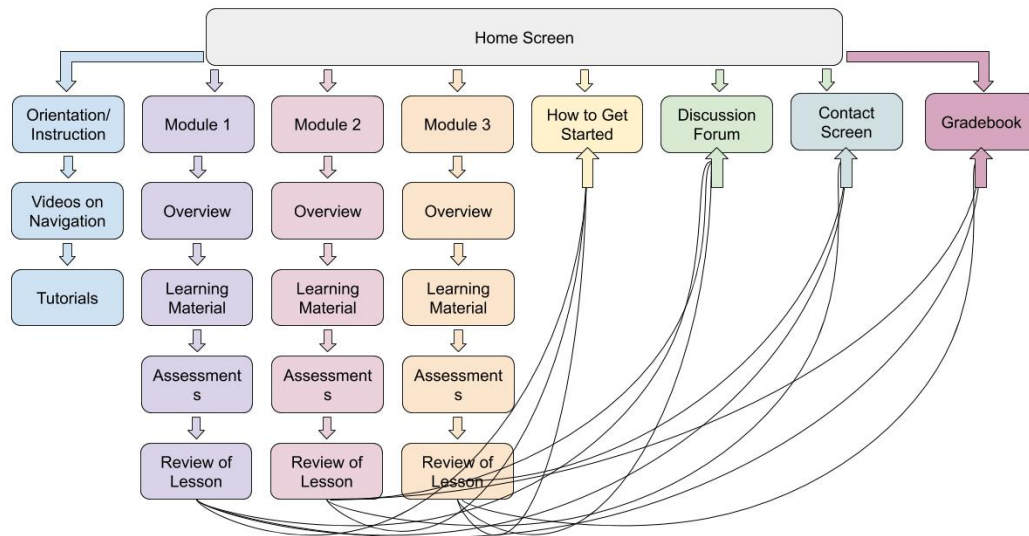
Abby is an 8th grade student who enjoys working on assignments and projects with her classmates. She is a straight A student who also likes to work ahead whenever possible. Abby's teacher is required to teach her students about digital citizenship and decided to use the WBLS as the best option with only having limited class time to devote to the topic at school.

She logs into her Gmail account and clicks on her class webpage located on the bookmark bar. She scrolls down to where her teacher posted the link of the Digital Citizenship WBLS. She is greeted by the welcome page. She clicks on the link for the discussion board because last night she made a post for module 3. She checks for replies on her own post and reads two of the comments her classmates left. She types out her response for the first classmate and hits the reply button. She reads the response of her second classmate. She begins typing out her reply before hitting the submit button. She decides to complete one of the required two response posts. She scrolls down to her classmate Shaun's post about cyberbullying.

After reading the post, she comments on his post citing one of her own experiences with cyberbullying and clicks the reply button. She is grateful and feels more comfortable sharing her personal experiences on the discussion board instead of having to talk about them face-to-face. Next, Abby scrolls to the top of the page to select the module 3 tab. She locates the cyberbullying presentation/website project assignment and starts reading the instructions. She starts to get excited about creating a website and opens up her Gmail account in another tab. She types out an email to a friend asking her to be partners for the project and hits send. Abby switches back to the WBLS window. She wants to make sure she understands the requirements for the project before getting started. She goes to her Drive and opens up a new Google Document and starts brainstorming different ideas. Before leaving the WBLS, Abby clicks on the link to her grades and reviews the feedback from her teacher regarding her recent case study assignment. She is excited to see that she received a perfect score along with some constructive feedback and can look forward to focusing on the collaborative project with her classmates. The WBLS allows Abby to complete assignments individually but also gives her the opportunity to work collaboratively with others on assignments and projects. Even if she is not at school, she still has the ability to connect with her classmates and work efficiently.

UI Specification

a) Site Map



b) Activity Guide/Directions

- 1) Students will login to their Google Account.
- 2) Students will access the Google site through their Google Classroom.
- 3) Students will navigate the site to locate content such as the orientation/instruction, module lessons, how to get started, contact, and gradebook.
- 4) Students will use the how to get started button to learn how to get started with all of the parts of the module.
- 5) Students will then read the instructions for each module; the overview, learning material, and review of the lesson.
- 6) After completing all of the parts of each module, students will complete the assessment(s) that go with each module. Some examples of the assessments are, participating on the discussion board, creating a google site, creating a video, upload videos to YouTube, creating a google form, google doc, and a quiz with multiple choice questions and an essay.

There will be a video in the help section of the WBLS that tell students how to get started in the course. Here is a link to the video we will be using:

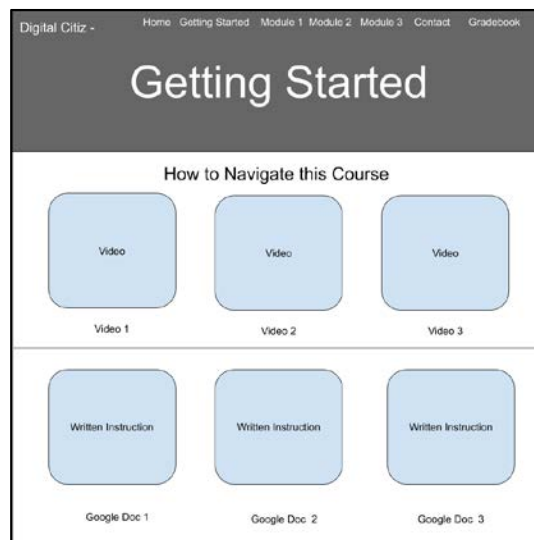
https://www.youtube.com/watch?v=xM_vCJ9M6IU

The images below are screenshots of the prototype we are currently developing for this project. The website can be accessed at: <https://sites.google.com/zips.uakron.edu/digital-citizenship-fab-five/getting-started>. Please note, that when you view the website it may look slightly different as we are in the process of adding content to it.

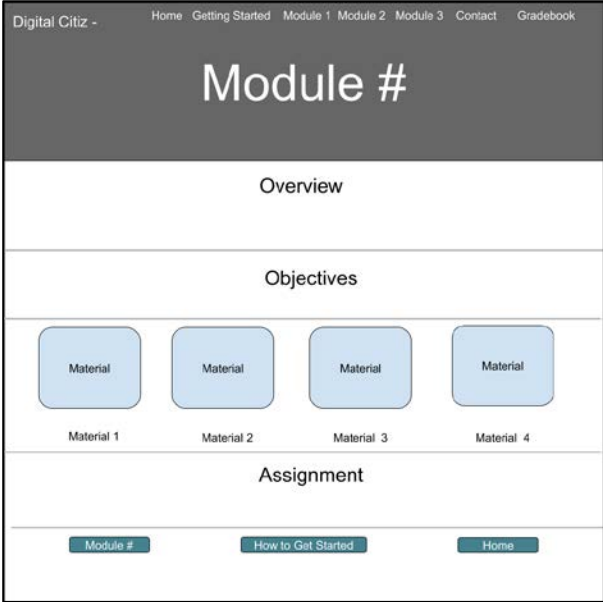
c) Main Page Interface



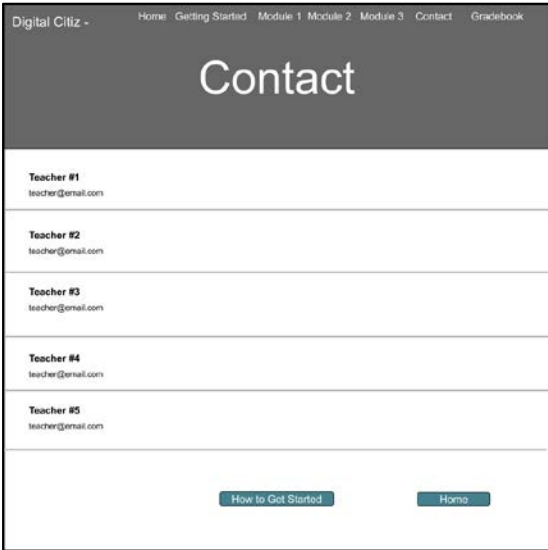
d) Sub Pages Interface i.) Getting Started



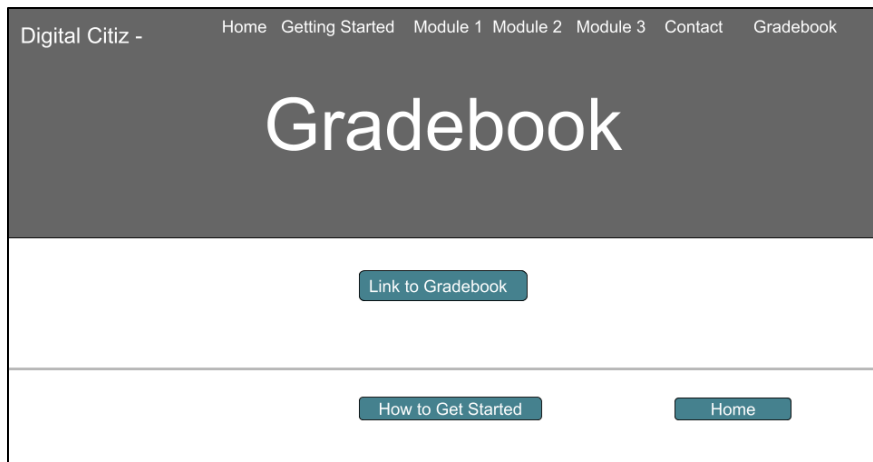
ii.) Modules



iii.) Contact

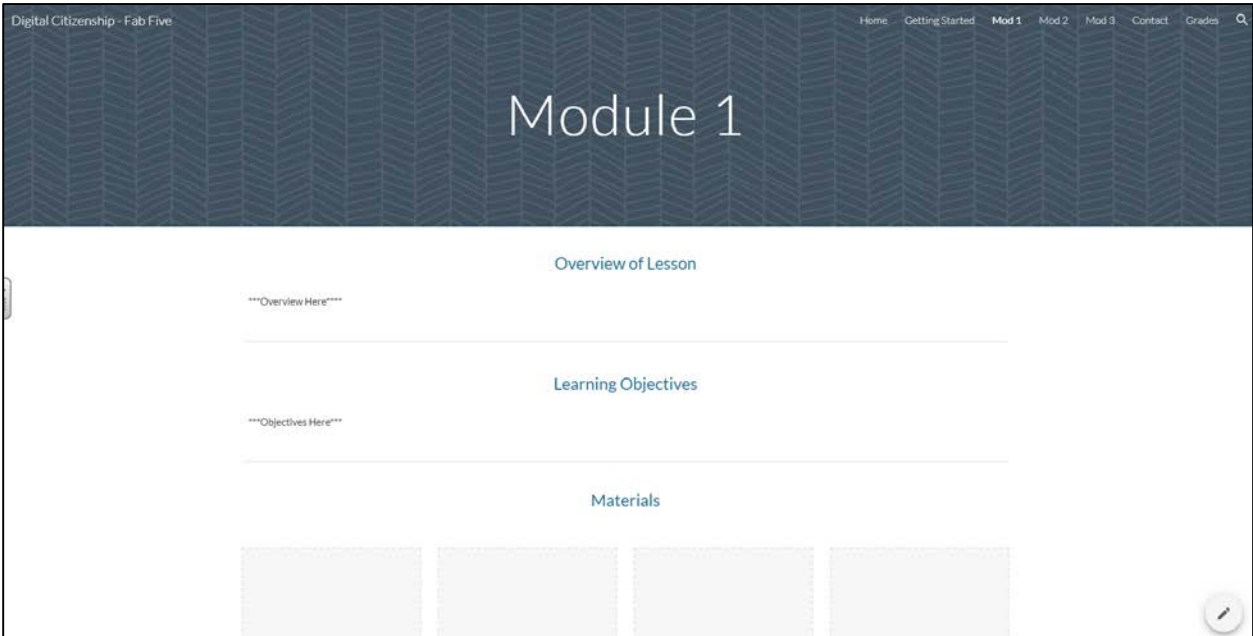
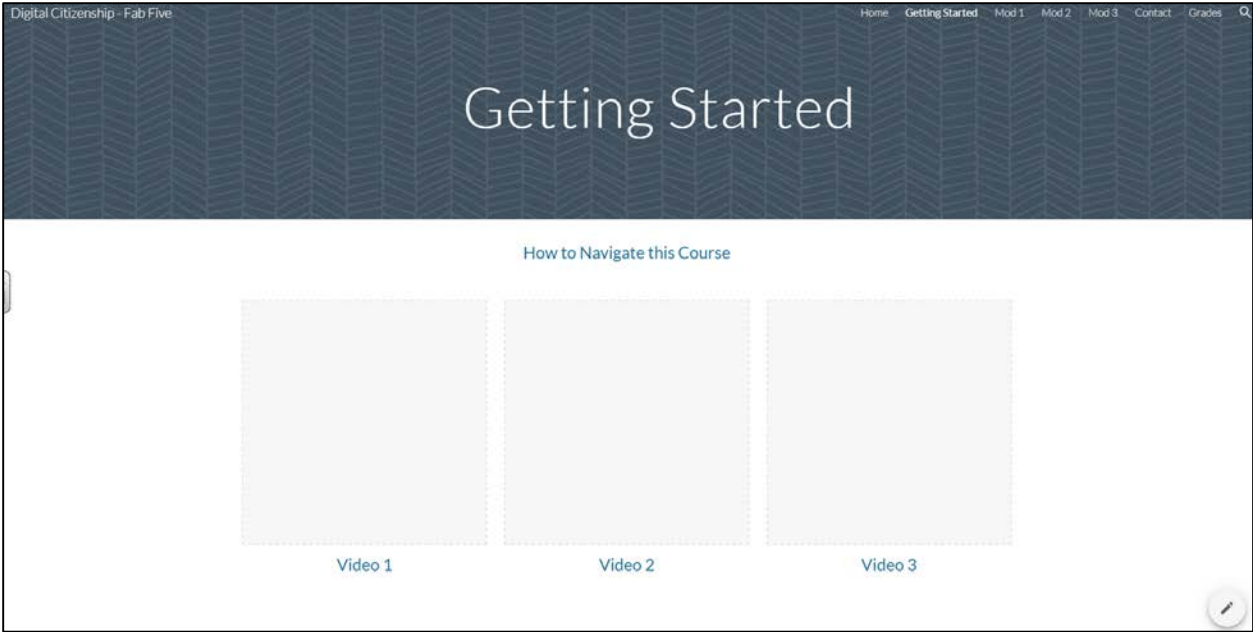


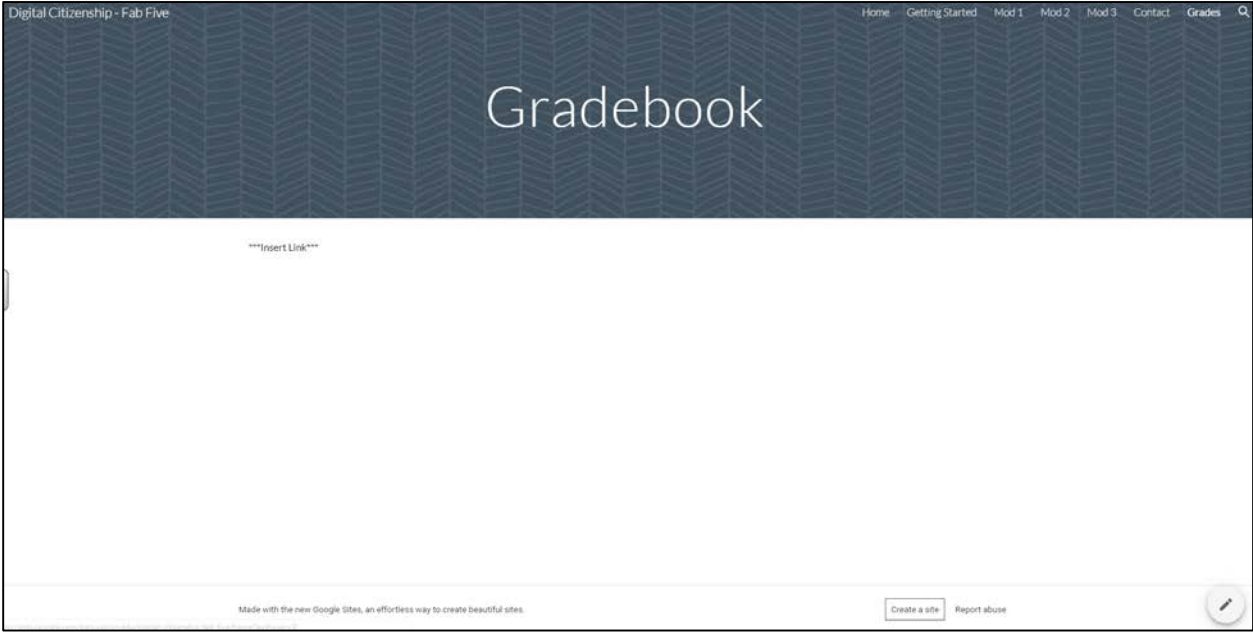
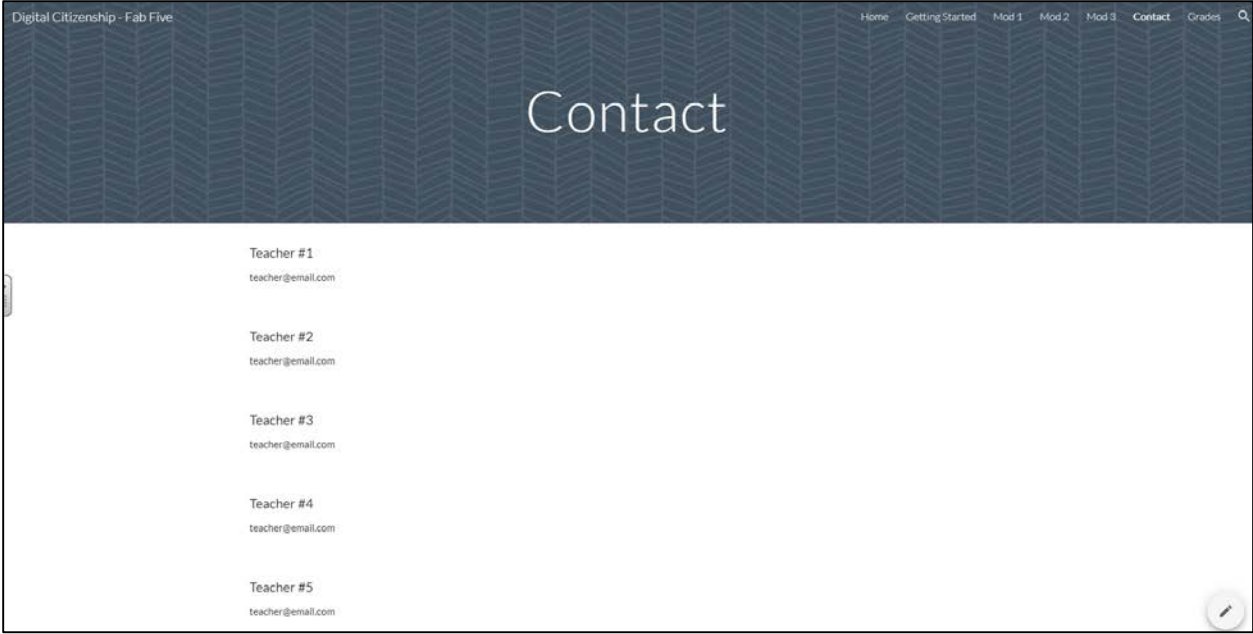
iv.) Gradebook



e) Prototypes







Expert and User Reviews

1. Revised Evaluation Plan for Formative Evaluation Section:

The purpose of the formative evaluation plan for our Web-Based Learning System (WBLS) is to analyze the effectiveness of the product during the design and development phase to ensure it is meeting the learning levels of 6th-8th grade students. Within the WBLS, the content is divided into four lessons: Digital Privacy, Digital Footprint, Cyberbullying and Online Communication. The primary stakeholders are the middle school students participating in the Digital Citizenship WBLS. Secondary stakeholders include middle school teachers who will be implementing the WBLS with their students.

User Reviews:

For our potential users we conducted two one-to-one tryouts with middle school students. The tryouts were designed to ensure the material is understandable and meeting the needs of the intended users. We used the observed behavior feedback method since we were able to be present during the tryouts.

We asked two middle school students to try our Digital Citizenship WBLS and give us feedback in order to make improvements. The middle school students included Thomas, a high performing sixth grader and Ryan, an eighth grader with an IEP for Autism and ADHD. Thomas is the son of one of our team members so was easily available to try out the WBLS. He is 11, loves anything utilizing technology and was eager to try out the WBLS. Thomas has a gifted identification and generally receives straight As. His teachers comment that he is outgoing, a hard worker and loves to learn. Ryan is the son of one of our team member's close friends, so he was also happy to help. Ryan is 13, extremely bright, but struggles academically because of difficulty following directions and staying organized. The students attend the same school and are very comfortable using a computer and navigating websites.

In addition to the students, we also relied on experts to review our WBLS.

Web Design Experts

The web design experts are from Stark State College. They are both members of the eStarkState division which is responsible for overseeing the Blackboard Learning Management System and working with Faculty on course design. These experts are both Certified Peer Reviews for Quality Matters and have done internal reviews to ensure classes at Stark State College meet these standards. Our first expert is the Linda Morosko, Director for eStarkState. She has worked in online learning since June of 2007. Linda oversaw the transition from the Angel to Blackboard Learning Management System in 2017. She also has extensive knowledge in Instructional

Design and Technology. She graduated from The University of Akron with a Masters of Arts in Education and a Certificate in eLearning. Our second expert is Patti Brown, Instructional Designer for eStarkState. Patti has worked for eStarkState since May 2011. She works closely with Faculty to ensure they are developing new courses using the principles of Universal Design for Learning and meet the standards set by Quality Matters. No course is allowed to run as Stark State College unless Patti has approved it. She recently spoke at the Quality Matters Ohio Annual Meeting about a new tool she has developed to evaluate courses with. She is also being considered as a speaker for the Quality Matters National Meeting which will take place later this year. These experts will be able to provide information on the design and course layout will be beneficial for making improvements to the system.

Content Experts

We will share our WBLS with the following content experts: two middle school teachers. Our first content expert is Christine Leonard. She has taught middle school science for 15 years. Our second content expert is Kelsey Erickson. She has taught middle school language arts for 6 years. Both experts have master's degrees in their respective content areas. Both are familiar with teaching mini lessons regarding digital citizenship. We sought input from these professionals in regards to the design, goals, content and technology of our WBLS.

2. Relevant Documents/Guides/Instruction:

a. For Web Design Expert Review

Each Web Design Expert was provided a description of the project in a face-to-face meeting. They were asked if they would be willing to review the prototype from a design and usability perspective.

Once the prototype was ready, they were emailed a link to use for access to the WBLS and provided survey questions to complete. These questions addressed various components of the systems that they needed to review. They also had access to one of our team members for questions they may have regarding the system.

Survey questions for these experts included:

1. Is the website easy to navigate for learners? If not, what suggestions do you have for improvements?
2. Were there any links that did not work properly? If so, which ones?
3. Are the materials easily accessible by the learners?

4. Does the WBLS layout enable the learner to navigate efficiently through the site?
5. Is the layout of each page appealing and effective?
6. Is the content information clearly and concisely presented? Is the amount of content on each page appropriate?
7. Are the text and font sizes easy to read? Is the color scheme pleasing to the eye?
8. Do supporting graphics and features enhance the learning and are they without distractions?
9. Is the organization and structure on each page appropriate and enhance learning?
10. What additional suggestions do you have for improving the overall layout, navigation, design, or overall appearance of the WBLS?
11. What did you like about the WBLS? What suggestions do you have for improving the WBLS?

b. For Content Expert Review

Each content expert was provided with a description of our WBLS project. They were asked if they would be willing to participate in reviewing our prototype during this design and development phase.

After the prototype was ready, they were emailed a link to use in order to access the WBLS. They were also provided with survey questions to complete as they reviewed the WBLS. These questions addressed various components that they needed to review. They also had access to one of our team members for questions they may have regarding the system via over the phone.

Survey questions for these experts included:

1. Are the learning objectives clear and appropriate? Are the learning instructions clear and complete?
2. Does the content and assignments seem appropriate for middle school students grades 6-8?
3. Do the activities promote learning? Do the instructional activities promote thoughtful and reflective responses or discussions?
4. Would the organization and structure of the content be clear for learners to understand? Is there anything that is confusing or difficult to understand?
5. Is the content interesting to learners? Would it keep their attention?
6. Does it have good navigational design? Are the icons easy to use and clear as to their meaning?
7. Does the WBLS encourage a collaborative atmosphere where learners can interact with one another?
8. Is the information on each page and in each lesson complete, covering the

content properly?

9. Does any additional content or instructional materials need to be added?
10. Are there any errors in the content or instructional materials?
11. What did you like about the WBLS? What improvements would you make?

c. For Potential Users Review

All potential users were given the same verbal instructions prior to accessing the WBLS.

-Thank you so much for volunteering to help test out our Digital Citizenship WBLS. My classmates and I have created a Google Site to teach middle school students like yourself more about Digital Citizenship. We need your help today by taking a look at our website components and telling me or writing down any problems or questions you encounter. You are one of the very first people to see this, so please feel free to tell me anything you think will make it better for future middle school students.

The students were provided with a blank piece of paper to record any problems or questions. Periodically throughout the tryout, the observer asked the students if they had any problems or questions. The observer took notes to record how the students navigated the website and any problems or questions the students verbalized. This observation also included non-verbal cues such as obvious frustration or boredom.

At the end of the tryout, each student was asked if there was anything about the design or display of the website they would add or change.

3. Results/Finding for Expert & User Review:

a. From Web Design Experts

The feedback from the Web Design Experts was very helpful. Overall, it was positive and they made a few suggestions on how we can improve the product. One thing that was discovered is the access rights on our pages needed modified, this was an important change as it would affect us being able to use the WBLS with users who do not have UA email addresses.

The consensus was that the website was accessible for our users. This was an important aspect of the project as the goal of the team was to develop a tool that could be used by any student, including those with hearing impairments. The experts commented that it was easy to enlarge the videos and that closed captioning had been added.

Our feedback on the navigation was positive. There was a comment from Patti Brown suggested we remove the Discussions from the navigation menu. She made an excellent point that since the discussions are assigned for specific weeks that it could cause confusion for students. Since the users did not

comment on any confusion we will keep the current navigation structure. The other recommendation was to rename the lessons so the user understands the order they should be completed in. For instance, Lesson #1: Digital Privacy; Lesson #2: Digital Footprint.

Our Web Design Experts made a few suggestions on the graphics of the website. Each page has a header that is currently the same. It was recommended we change these that way the student can associate it with the image they see on the Lessons main page. It was also suggested we add an additional image to the welcome page and reduce the text if possible. Both of these suggestions will be taken into consideration. There were also a few links that needed titles updated or were not working. These will be corrected as soon as possible. Linda suggested the inclusion of a video on how to use Flipgrid for the Digital Footprint assignment. This video will be added.

b. From Content Experts

The feedback from our content experts was very positive. Both content experts loved the idea of the digital citizenship WBLS because it is a very important and relevant topic, especially in middle school. They expressed that the learning objectives and instructions are clear, complete, and to the point. Each expert commented on how nicely the videos were done, how effective they were, and stated they explained each issue well. Christine pointed out that the Privacy Discussion Board (searching for identity theft example) is good for a higher middle schooler (7th/8th) but lower grades might find it too challenging to complete. She suggested to maybe have some summaries available of different identity theft situations for lower grades.

Both experts stated the activities selected help the learner process the topics, reflect, and make connections to their own lives. They liked that each page format was set up in a similar manner, the information was clear and concise, and the site was not overcrowded in any way. Kelsey mentioned a valid point that there are many google forms involved in the learning. She stated it might be nice if there was a more fun way to review the information or a way that students could receive feedback immediately based on their responses. The navigation of the WBLS was said to be clear and very user friendly. One expert mentioned the WBLS is very complete and liked that it is divided by lessons that break digital citizenship into smaller categories.

The last survey question asks about what the experts liked and what improvements could be made. Christine really liked the overall concept. She said it was detailed enough to provide the needed information to middle schoolers and it also gives good examples of how to apply the citizenship in real life and doesn't just tell students to "be good digital citizens." Kelsey liked that the topic is relevant and important for students. She expressed how the format was easy to

follow and consistent throughout. The videos help to frame the lessons and engage students. She mentioned that some of the lessons have a lot of information presented through slides and most of the assignments are google forms, which could get boring for kids. But, overall the feedback was very positive and will help the group make adjustments to our WBLS.

c. From Potential Users

The early feedback from the users was mostly positive. Thomas began by watching the video and reading through all of the material on the welcome page. He skipped over the Getting Started section and went straight to the first lesson, Digital Privacy. He read through the material and watched the introductory video. He was able to easily adjust the sound and make the video play full screen. He commented that he liked the narrated version of the What to Share and What Not to Share slideshow. After he finished the items in the Materials section, he went back to the top of the page to determine what to do next.

He began working on the Assignments by completing the Privacy Quiz. He asked if it was open book, but did not attempt to go back to the WBLS. The quiz took him at least 15 minutes to complete. He struggled to come up with answers he thought would earn him the number of points listed next to each question. He similarly took several minutes to complete the What to Keep Private activity. He commented that he wanted to list five items to keep private since the point value for the question was five.

The Padlet activity is when he became visibly frustrated. He tried to complete part one by going to Google and typing “example of people who got identity thieved.” He did not like the results he saw so he clicked on a suggested search listed under people also search for, “id theft examples 2018.” He clicked on a couple of the results, but stated “I’m so confused. I don’t understand what they are saying.” At this point he typed “Part one is too hard” as his comment on the Padlet and “Assignment 3 is too confusing” for part two.

Although Thomas did experience some frustration, he was successful in learning the material and scored well on the quiz and activity. To end the tryout I asked him what could be changed about the display and he mentioned adding images to the top of each page.

Ryan, an 8th grader seemed much more comfortable throughout the tryout. He began at the welcome page and watched the introduction video. He skipped the rest of the welcome page and went to Lesson 2-Digital Footprint. He watched the opening video and then went straight to the materials. He worked through all of the materials and then asked, “Is that it?”

I asked him to attempt the Digital Footprint quiz and he easily answered the first question which asked for a personal definition of digital footprint. He did not

understand what the second question was asking and could not answer it even after an explanation.

Finally, he tried to complete the Flipgrid video. He mentioned he used Flipgrid before. I asked him to try it to see if it was functioning properly and he did. We figured out the way it was set up would not work. Students will need to go to the actual Flipgrid site in order to record their responses. When asked about his general thoughts on the WBLS, he said it was engaging and fun.

4. Ideas for modification for design products:

WBLS Product	Ideas for Modifications
Instructional Strategy Plan	<p>Assessments</p> <ul style="list-style-type: none"> ● Quiz directions revised to state students should not be using notes ● Revised the assignment for Privacy discussion so it better fit this age group of students ● A few spelling errors were corrected that had been found in the assignments ● Quiz question in Lesson 2 was changed to be more clear
Prototype and Website	<ul style="list-style-type: none"> ● Navigation of the WBLS to be slightly modified. The lessons will be revised to show an order as suggested by our Web Design Expert ● Imaging of the page header will also be revised so it's consistent to what the student is seeing on the main lessons page as suggested by our Web Design Expert ● Flipgrid how-to video was added to Lesson 2 ● Video links that were not working were updated in Lesson 3 ● Flipgrid link was changed in Lesson 2

Prototype Submission

Our prototype can be viewed at: <https://sites.google.com/zips.uakron.edu/digital-citizenship-fab-five/home>.

It was updated using the feedback from our users, experts and classmates.

Usability Test

Usability Test Plan:

The purpose of the usability test for the Digital Citizenship WBLS is to observe actual users navigating and interacting with the website. This information will inform our team of changes we need to make prior to the final implementation. We will look for strengths, weaknesses, areas of confusion and improvement, as well as overall user experience.

Since the Digital Citizenship WBLS is designed for students to work on individually, we found two middle school students to test the Google Site. The participants are Kate, an average to high achieving sixth grader and Drew, an average achieving seventh grader. Both students attend the same school and have had access to one-to-one Chromebooks for the last three years. Both students have used G Suite for Education for several years, so are comfortable and familiar with using Gmail, Sites, Docs, Slides and Classroom.

The tests were given on Thursday, June 27 in a quiet area of the student's home using the student's personal technology device, since the team member completing the usability tests knew both students personally. The usability tests took both students about an hour to complete. The tests included a standard introduction and explanation of the purpose of the usability test, observation of student interaction with the WBLS, and a debriefing session about the user's experience.

Each student was asked to begin at the homepage and then complete at least one of the lessons. The students were asked to look at all of the learning materials and at least attempt each of the listed activities. This ensured all components of the lessons were tested for usefulness, learnability, efficiency and user satisfaction.

The students were asked the following questions during an informal discussion with the team member at the completion of the session:

1. Did you learn something about Digital Citizenship?
2. Were the lessons easy to navigate?
3. What did you like most and least about the WBLS?
4. Was the WBLS engaging?
5. Is there anything we could change to make the WBLS better for future students?

Findings/Results of the usability test:

Drew began on the welcome page and after watching the introductory video, carefully read through the directions and objectives. When he noticed the button for how to navigate the site, he asked if he should click it. He did, which brought him to the Getting Started section. He watched the first two videos explaining how to enlarge videos and how to complete lessons. Drew's success in getting started with very little input confirmed the organization of the WBLS was appropriate for the middle school learner.

It also verified that students would not initially become overwhelmed at the prospect of completing the WBLS with limited guidance from a teacher.

At this point he was told to go to Lesson 3-Cyberbullying. Again, he carefully read the overview, watched the video and read the learning objectives. When he got to the materials, he opened the narrated version of the What is Cyberbullying slideshow and clicked to make it full screen. Once finished he clicked on the next slideshow and after the first couple of slides realized it was the same thing, just not narrated. He went on to read the Sondra's story scenario and seemed puzzled if he should answer the discussion questions below the story. Again, Drew had no trouble navigating through these lesson materials. His confusion about answering the questions was valid and will be discussed as a possible revision.

He started watching the How to Use Google Slides to Make a Presentation video and seemed confused. He stopped the video and I explained the assignment for this lesson was to make a presentation or video to explain what he learned about Cyberbullying. I asked him if he thought he could do that based on what he had just learned about cyberbullying and he said no. It was revealed there was not a clear explanation of the assignment and this particular task would need more support from a teacher or possibly the addition of allowing students to work in a group for this assignment. These issues will be discussed by the group and a final decision will be made before the final implementation.

Kate started on the welcome page, watching the video. She commented on liking the video and then read through the directions and objectives. After the objectives, it was obvious she did not know where to go next. I told her she could go to the Lessons tab at the top and choose a lesson to complete. Although the welcome page seemed self-explanatory, Kate indicated she did not know how to proceed. Possibly, the addition of instructions on where to go next would be helpful at the bottom of the welcome page.

To complete Lesson 4-Cyberbullying, Kate watched the video and again commented on liking the video and it reminding her of what they learned at school about cyberbullying. She looked at the Materials section, but did not click on anything for at least a minute. She sat there until I suggested to click on the first slideshow/video. After completing the slideshow she proceeded to the Power of Words activity. After reading the scenario, she verbally shared her answers to the discussion questions with me and was able to recite the steps in the STOP acronym from the slideshow and video. It was obvious she wanted to discuss the questions, so this is an aspect of the activity that we can explore further.

Kate continued to work through the materials, watching the Netiquette video and the Good Email slideshow/video. She was able to complete the Email Activity with little assistance. She did ask what the topic of the email should be. The Padlet activity was also easy for her to do. She finished the lesson by reading the review document. The ease in which Kate completed the activities showcased the learnability of the material.

The only suggestion Kate offered on the site design was to make the tabs at the top more prominent.

Suggestions for improvement:

As a team we have discussed the following improvements:

- Add something at the bottom of the welcome page that says Go to Lesson 1 or the Getting Started Page
- Add directions to the Materials and Assignments headings on each page-
- Something like...
- “First look at all of the Materials listed in this section to learn more about the topic”
- “Once you are finished with the Learning Materials, go to the Assignments below to show what you have learned”
- “Complete the Review of Learning” section of the Module.”
- “Post to the Discussion Board to reflect on your learning from each Module that was completed.”

Implementation Plan

Our WBLS will be implemented with Middle School students grades 6-8. The WBLS was designed to familiarize students with Digital Citizenship. Within the WBLS, the content will be divided into three parts: Privacy and Security, Digital Footprint, Cyberbullying, and Communication.

Time Schedule and Implementation:

The following will be used to implement the WBLS.

Prior to starting week one students will:

1. Sign into the WBLS to ensure you have access. If you have any issues accessing the system, alert the instructor.
2. Explore the WBLS site
3. How to Get Started-Watch 5 videos on basic navigation
4. Observe how the modules are set up
5. Watch video on what Digital Citizenship is on homepage
6. Find the Contact Page
7. Email instructor with any questions

Week 1	<p>To successfully complete Module 1 - Digital Privacy, students will do the following:</p> <ul style="list-style-type: none"> ▪ Review the welcome overview and video ▪ Review the learning objectives ▪ Review all items listed in the Materials section ▪ Complete Privacy Quiz ▪ Complete Privacy Discussion ▪ Complete What to Keep Private Activity ▪ Review Digital Privacy notes
Week 2	<p>To successfully complete Module 2 - Digital Footprint, students will do the following:</p> <ul style="list-style-type: none"> ▪ Review the welcome overview and video ▪ Review the learning objectives ▪ Review all items listed in the Materials section ▪ Complete Vote for the Next Host ▪ Complete Digital Footprint Quiz ▪ Record your Digital Footprint response ▪ Review Cyberbullying notes
Week 3	<p>To successfully complete Module 3 - Cyberbullying, students will do the following:</p> <ul style="list-style-type: none"> ▪ Review the welcome overview and video ▪ Review the learning objectives ▪ Review all items listed in the Materials section ▪ Complete Cyberbullying Presentation or Website ▪ Review Cyberbullying notes
Week 4	<p>To successfully complete Module 4 - Communication, students will do the following:</p> <ul style="list-style-type: none"> ▪ Review the welcome overview and video ▪ Review the learning objectives ▪ Review all items listed in the Materials section ▪ Complete Netiquette Discussion ▪ Complete Email Activity ▪ Review Communication notes

Personnel and Duties Allocation:

Web Design Expert: Linda Morosko Director for eStarkState	<ul style="list-style-type: none"> • Reviewed the structure/navigation of the WBLS • Tested all videos, materials and assignments to ensure everything was in working order • Reviewed all content for spelling issues • Reviewed and made suggestions for how the WBLS could better meet Quality Matter Standards
Web Design Expert: Patti Brown Instructional Designer for eStarkState	<ul style="list-style-type: none"> • Reviewed the structure/navigation of the WBLS • Tested all videos, materials and assignments to ensure everything was in working order • Reviewed all content for spelling issues • Reviewed and made suggestions for how the WBLS could better meet Quality Matter Standards
Content Expert: Christine Leonard Middle School Science Teacher	<ul style="list-style-type: none"> • Reviewed the Start Here area to ensure it was easy for the students to understand • Reviewed all Learning Modules which included introductions, learning objectives, materials and assignments and provided suggestions of modification to ensure all times fit the targeted age group • Reviewed all content for spelling issues
Content Expert: Kelsey Erickson Middle School Language Arts teacher	<ul style="list-style-type: none"> • Reviewed the Start Here area to ensure it was easy for the students to understand • Reviewed all Learning Modules which included introductions, learning objectives, materials and assignments and provided suggestions of modification to ensure all times fit the targeted age group • Reviewed all content for spelling issues

Learning Tasks vs. Facilitation/Strategies:

<p>Students will review WBLS and content</p>	<ul style="list-style-type: none"> • Provide standards and objectives • Provide time to explore the WBLS • Provide clear instructions • Provide rubrics with point values and expectations • Provide a Getting Started Page along with Contact Page
<p>Students will review content of each module</p>	<ul style="list-style-type: none"> • Provide step-by-step instructions for each of the 4 modules • Provide links and videos for the content materials • Provide chapter activities • Provide embedded discussion board • Provide Module assessment for each lesson
<p>Students will participate in discussion boards</p>	<ul style="list-style-type: none"> • Provide discussion board directions, expectations, and requirements for each module • Provide directions on how to post in discussion board
<p>Students will complete assessments / assignments for each module</p>	<ul style="list-style-type: none"> • Provide links on each module • Provide directions for assessments on each module • Provide writing prompts, assignments, videos,etc for each module

Summative Evaluation Plan:

The purpose of our chosen Web-Based Learning System (WBLS) is to evaluate how effectively our lessons and culminating activity were and to see if our objectives were met. This summative evaluation will take place after the first class completion of the WBLS. We will utilize student surveys, teacher observations, and teacher questionnaires. The students and classroom teachers will help provide us with data through these surveys.

Materials for Examination:

Materials to be Examined
Design Plans/Objectives
<ul style="list-style-type: none"> • Objectives aligned with ISTE Standards • Instructional Strategies • Learning goal and outcome aligned
Content
<ul style="list-style-type: none"> • Is student growth measurable? • Is there a need for reteaching? • Is the technology used appropriate for this content?
Technology
<ul style="list-style-type: none"> • Google Forms • Google Sites • Activities that were used

Preliminary Planning for Summative Evaluation:

Evaluation Criteria	Sample Questions	Methods and Tools
Effectiveness		
Goals	<ul style="list-style-type: none"> • Is the goal accurate? • Are the goals and objectives achievable? • Are the goals and objectives clear? 	Expert Review Surveys Users Extant Data
Content	<ul style="list-style-type: none"> • Is the information complete, covering the content properly? • Do the activities promote learning? • Do the instructional activities promote thoughtful and reflective responses or discussions? 	Expert reviews Extant data Surveys End-user review
Technology	<ul style="list-style-type: none"> • Do the technology applications function properly? • Were materials easy to access by students? 	Expert Review End-user review Observation

Message Design	<ul style="list-style-type: none"> • Do supporting graphics and features enhance the learning and are they without distractions? • Are directions clear? • Was the time frame of the course appropriate? 	Expert Review Survey End-user review
Efficiency		
Goals	<ul style="list-style-type: none"> • Are the goals stated clearly and concisely? • Is the purpose stated clearly and concisely? • Is there congruence between the instructional goals and content? 	Expert review Surveys End-user review
Content	<ul style="list-style-type: none"> • Is the content information clearly and concisely presented? • Is it timely and up to date? 	Expert review End-user review
Technology	<ul style="list-style-type: none"> • Is access to the instructor or other learners provided? • Is the website structured appropriately? • Do the technology applications function easily and efficiently? 	End-user review Expert review
Message Design	<ul style="list-style-type: none"> • Is the organization and structure of the message coherent? • Are there titles and subtitles to organize the content? 	Expert review End-user review
Appeal		
Goals	<ul style="list-style-type: none"> • Are goals relevant to learners? 	End-user survey
Content	<ul style="list-style-type: none"> • Is the content interesting? 	End-user survey
Technology	<ul style="list-style-type: none"> • Any typographical, spelling, grammar, punctuation errors? • Is navigation easy? 	Expert review Observation
Message Design	<ul style="list-style-type: none"> • Is the vocabulary level and tone appropriate for the content and audience? • Do supporting graphics and features enhance learning without distractions? • Does it have good navigational design? Are the icons easy to use and clear as to their meaning? 	Expert review End-user survey Observation

Who are the stakeholders?

The primary stakeholders include the instructional designers Jessica Aubley, Valerie Coughlin, Joellen Denk, Katie Lovick and Allison Nagle, as well as the middle school students participating in the Digital Citizenship WBLS. Secondary stakeholders include other middle school teachers who will be implementing the WBLS with their students.

What is being evaluated?

The WBLS is being evaluated on its effectiveness to teach the importance of digital citizenship. It is also being evaluated for its impact on the students and their understanding of the topic after they have completed all of the modules.

Who are the evaluators?

The web design experts are from Stark State College. They are both members of the eStarkState division which is responsible for overseeing the Blackboard Learning Management System and working with Faculty on course design. These experts are both Certified Peer Reviews for Quality Matters and have done internal reviews to ensure classes at Stark State College meet these standards. Our first expert is the Linda Morosko, Director for eStarkState. She has worked in online learning since June of 2007. Linda oversaw the transition from the Angel to Blackboard Learning Management System in 2017. She also has extensive knowledge in Instructional Design and Technology. She graduated from The University of Akron with a Masters of Arts in Education and a Certificate in eLearning. Our second expert is Patti Brown, Instructional Designer for eStarkState. Patti has worked for eStarkState since May 2011. She works closely with Faculty to ensure they are developing new courses using the principles of Universal Design for Learning and meet the standards set by Quality Matters. No course is allowed to run as Stark State College unless Patti has approved it. She recently spoke at the Quality Matters Ohio Annual Meeting about a new tool she has developed to evaluate courses with. She is also being considered as a speaker for the Quality Matters National Meeting which will take place later this year. These experts will be able to provide information on the design and course layout will be beneficial for making improvements to the system.

We will share our WBLS with the following content experts: two middle school teachers. Our first content expert is Christine Leonard. She has taught middle school science for 15 years. Our second content expert is Kelsey Erickson. She has taught middle school language arts for 6 years. Both experts have master's degrees in their respective content areas. Both are familiar with teaching mini lessons regarding digital citizenship. We sought input from these professionals in regards to the design, goals, content and technology of our WBLS.

What are the evaluation methods and tools?

We used surveys for evaluation for this project. Each had a face-to-face meeting with one of the members of the group to discuss the project. They were then emailed a survey with specific questions regarding various parts of the system. This helped the expert stay on target with what they needed to review and what we needed feedback on.

How are data collected and analyzed?

Once each expert completed their evaluation, they were instructed to email it back to their content. It was then shared with the rest of the group. The results were reviewed by the group and then changes were discussed. Since the changes that were suggested were minor, they were quickly implemented into the WBLS.

How are evaluation results reported?

The feedback from the Web Design Experts was very helpful. Overall, it was positive and they made a few suggestions on how we can improve the product. One thing that was discovered is the access rights on our pages needed modified, this was an important change as it would affect us being able to use the WBLS with users who do not have UA email addresses.

The feedback from our content experts was very positive. Both content experts loved the idea of the digital citizenship WBLS because it is a very important and relevant topic, especially in middle school. They expressed that the learning objectives and instructions are clear, complete, and to the point. Each expert commented on how nicely the videos were done, how effective they were, and stated they explained each issue well. Christine pointed out that the Privacy Discussion Board (searching for identity theft example) is good for a higher middle schooler (7th/8th) but lower grades might find it too challenging to complete. She suggested to maybe have some summaries available of different identity theft situations for lower grades.

Reflections

Jessica Aubley

Description

This semester, the Fabulous Five to develop a WBLS that focused on educating middle-school aged children on being good digital citizens. When we discussed ideas for this project, this seemed like a natural fit. Many of our team members are middle school teachers and advised that it was difficult to find relevant content on the topic area.

In the recent years, one of Perry Local Schools has had several children commit suicide. Several of these cases happened due to cyberbullying. This is heartbreaking; no child should be so impacted by bullying that they take their own life. So as part of this project, Jessica requested that one of the modules be focused on what cyberbullying is and who to go to for help. I'm hoping this will have an impact on children and they will seek assistance from a trusted adult.

Our goal was to develop four lessons where the students learned about protecting their privacy online, what a digital footprint was, cyberbullying and being kind online communicators. We felt these lessons would help protect them in many areas and improve their communication skills. Our ultimate goal is for them to learn the basics of being good digital citizens.

We started by planning an easy to use WBLS. We didn't want the platform to be a barrier to learning. Our navigation is similar to what we see in our online courses at the University of Akron. It has a help area, a lessons area, discussion forum area, grades area and contact area. Everything is labeled clearly for students are not searching for items in the course.

Our content was designed using the principles of Universal Design for Learning. We wanted to make sure students with different learning styles could still master the content. This was important since there is a good possibility we will have visual and auditory learners. The students who reviewed the prototype commented that they liked how the lessons had audio included in them. It made it more enjoyable for them to learn.

Our assessments were focused on our lesson learning objectives. They were kept simple because of the age group of our students. We used various forms of assessments to ensure the students would not get bored throughout the course. Our content experts commented on this. They liked that the students were not just completing quizzes throughout the course and that they were interacting with one another on the discussion forums that we used.

Overall, I believe we developed a great prototype. The students who served as our users seemed to enjoy their experience. The teachers who served as reviewers commented that they could use this in the classroom.

Impact

We worked well together throughout this project. It didn't take long for us to get in a good work flow for assignments and assist when someone needed help on part of a document. We learned many things from each other including how to set learning objectives, creating measurable assessments that were geared towards this age group and how to use Google Sites.

In reflection, this project was a fantastic learning experience for us. This process was a bit challenging since summer semester runs rather fast and it's difficult to find students who are willing to test school lessons. We were able to overcome these challenges by having good group communications, effective planning of time and wonderful students who were willing to take a couple hours out of their summer to help us. Overall, the impact was excellent as now we have seen the process of planning a WBLS, learned how a group of individuals can work together to create a WBLS and how to overcome the struggles that designers may run into during the planning, creation and testing phase. These are experiences that will help us when we are planning projects for the future in our respective jobs.

Intent

Now that we have completed our prototype, we hope to share it with instructors in our respected school districts. During our expert review, we learned that this is a tool that they would really like to use in classrooms. The videos presentations are all loaded on YouTube and the teachers have the ability to download the slides that go along with the videos. This will allow the teachers to take the materials and use them however they prefer in their respected class rooms. The assignments were all created using free tools and we are happy to share them with any of the teachers who wish to use the materials we have developed.

Our group members also plan to use the system with their actual students. Since we all have access to the Google Site and assignments, we will be able to make copies of the website and use them with our respected students. We believe that this is a great learning tool for Middle-School aged children. Jessica is planning on using the Online Communication section with her College students. She finds that they do not understand the basic rules of effective online communication. Many of her students grew up in the inner-city and have not had much experience with digital communications. This section will be helpful in explaining the basics. Since the slides are interactive and the assignments promote critical thinking, she feels this will be a helpful tool for their learning. It'll be used as an extra credit assignment for the first week of her courses.

We believe we developed a project that met our ultimate goal of educating students on becoming good digital citizens. We hope that you have enjoyed reviewing our documentation, video presentation and prototype. We look forward to your feedback!

Valerie Coughlin**Description**

I am a third grade general education teacher. I have only been teaching for 5 years. I am quite grateful that my team has had much more experience in the subject of our WBLS than me. They are either more familiar with middle school aged children, or have more technology experience than me. So I am so grateful to have gained so much knowledge from them. We decided that Digital Citizenship is something that all of us either have, had, or will have experience with teaching this to students. Especially since schools are becoming 1:1 with technology. So this topic can be useful for so many people.

Impact

Like I stated above, I teach 8 year old general ed. So middle school and tech are not something I am used to. I think that our WBLS came out great. I am quite proud to have been a team member for such an amazing final project. I am not going to lie, emailing in a group of 5 people and during the summer can be such a hard feat! But I am so appreciative to my group members. I have learned so much and I can definitely see myself using some of my knowledge that I have gained from this class in my future.

Intent

This has opened my eyes to how to use and create Google Sites. Even for my third graders, this could be useful. Within our subject specifically, I know I can use some of this information for my students, especially since we are 1:1 with chromebooks. Eight year olds really don't know all that there is to the internet. But I am glad that I get to use this information to better them as students.

Joellen Denk

Description

The content for our WBLS is a topic I currently teach as a middle school librarian. Our group agreed that Digital Citizenship is an important topic for middle school students and is often overlooked and not explicitly taught. The specific aspects of Digital Citizenship we decided to include were Digital Privacy, Digital Footprint, Cyberbullying and Online Communication. We chose Google Sites as a platform because several of our team members had previous experience using Google Sites. We intentionally kept the design and format of the WBLS as simple and user-friendly as possible, while also implementing engaging videos and activities that would keep the interest of our target audience. We also made sure to use several of the other G Suite for Education apps students are already familiar with to streamline the delivery of the content, including Google Docs, Forms and Slides.

Impact

My experience with the target age group and content was essential to the success of our WBLS. I organized the overarching concept of the WBLS, including identifying the standards and module topics, as well as sharing many of the content resources. I was also able to make an important contribution by finding all of the users and conducting the different user reviews and tests. Seeing the potential users work through the WBLS was invaluable in the evaluation process. I was able to suggest changes that greatly enhanced our WBLS based on actual user feedback. One of the biggest strengths of our WBLS was that we were able to curate the best resources on Digital Citizenship into an organized website, as well as provide high-quality activities and assessments. We eliminated the barriers for teachers to be able to incorporate these essential lessons into their classrooms.

Intent

I intend to use the Digital Citizenship WBLS with my 6th grade classes in the upcoming 2019-2020 school year. I also plan to share it with colleagues and the Instructional Technology coach in my district to discuss how it could be used more widely.

Kaitlyn Lovick**Description**

I worked with the Fab Five on a WBLS that allows teachers to introduce, teach, and assess students in middle school and high school on digital citizenship. We chose this design because we were all familiar with the importance of digital citizenship, however we saw a need in some schools for more awareness. We chose to use Google Sites, as we were also all familiar with the site. We did not vary much in our content or in our design throughout the process. We had to make some adjustments based on feedback, but overall, our design was able to remain consistent.

Impact

This process was long and time-consuming, however I also found it to be beneficial. As a technology teacher, using Google Sites as a WBLS would allow for consistency with our Google programs. Creating the site and putting together videos that explains parts of the site was something that I found interesting and something that I could find myself doing more of.

Intent

After the WBLS process, I intend to create something similar for my own use. I teach kindergarten through third grade, so I wouldn't be able to use the same content. However, using the same ideas, as well as the same format, I can make a similar WBLS for my students. Another way that I intend to use what I gained from this project is by creating a platform that I could use with teachers in my school or district that would help them to learn new software that the district is implementing, or old software and technology that they may need a refresher on.

Allison Nagle**Description**

Our group designed and developed a web-based learning system about Digital Citizenship for middle school students grades 6-8. Within the WBLS, the content is divided into three parts: Privacy and Security, Digital Footprint, Cyberbullying, and Communication. We settled on the idea of the digital citizenship WBLS because it is a very important and relevant topic for students to learn and understand, especially in middle school. We chose to use Google Sites as a tool for our WBLS because of its functionality and compatibility.

Impact

The WBLS will provide teachers with resources to successfully implement digital citizenship instruction to students at their convenience. Using a WBLS, as opposed to other instructional methods will allow students to learn how to appropriately function online while actually interacting online. Since students in grades 6-8 typically have access to a personal device, as well as spend more time on technology during the school day, they need to know what information is okay to share but what information needs to be kept private. Especially, as they begin participating in social media, we want them to have the knowledge and confidence to participate safely. Our WBLS also focuses on kind and respectful online communication and how students can become “upstanders” in their school and online communities. We hope this WBLS encourages students to not only become better online users but online learners as well.

Intent

I plan on implementing this WBLS in the fall with my 8th grade students. After implementation and more feedback, we will also have the ability to add additional lessons and content regarding other areas of digital citizenship to the WBLS. This website has the potential to reach many students, informing them about digital citizenship and how to make this digital world a better place. Our group worked extremely hard on this project and I am excited to see it in action with a classroom full of students.