Mizzou K-12 Online

An Evaluation of Semester Based World History

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Executive Summary

The State of Missouri has a valuable resource for its residents in Mizzou K-12 Online. The origins of the program lie in former correspondence courses that could be completed by elementary and secondary age students throughout the state as a means to work toward achieving a high school diploma. With the advent of online learning in recent years, the Mizzou K-12 Online program was born to take correspondence courses to the next level and capitalize on the power of the Internet. Selected students, Karen Whelan, Stephanie Bossaller, Emily Millikan (team leader) and Scott Vonder Bruegge, of the spring 2015 ISLT 9455 Formative and Summative Assessment Course at the University of Missouri were asked to evaluate the system and report their findings to Dr. Holly Henry, an instructional designer-expert for Mizzou K-12 Online.

The introduction and background sections of this report offer insight into the history of the program. The goal of this evaluation was to provide substantive data regarding the state of the program as it is currently implemented. Several instruments were provided to evaluators, who then evaluated various aspects of the online course. While broad in parameters, the client has requested information that is formative in nature with an ultimate goal of identifying key areas needing improvement.

The results received from the evaluators were generally positive. Navigation, aesthetic and interactivity received the least favorable comments. This information was used to make informed decisions and recommendations for improvements to the course specifically and the program generally, including increased media support and site redesign for the benefit of future learners enrolled in Mizzou K-12 Online. This report

contains the results of the Formative Evaluation of the program's semester-based World History. The team utilized experts in the field of online education (and are introduced in the sample section) as well as adolescents that fit the profile of potential students to gather data on the course.

Dr. Henry has realized the potential that the offered courses have. In fact, while this evaluation will focus exclusively on the semester based World History course that is offered, her hope is to review the entirety of the program making the offerings more relevant, robust, and revolutionary while also maintaining their academic integrity and not be mere substitute for traditional correspondence courses.

Questions that are addressed in the evaluation protocol are raised in response to the decisions the client will need to make in regards to moving forward with the improvement of the Mizzou K-12 Online semester based World History course. All supporting material and resources can be found in the appendices.

Client Assumptions

Our client, Dr. Henry, is working under the assumption that the current state of online learning is much more technologically advanced in terms of interactivity, available collaborative tools, and electronic curriculum delivery alternatives offering many more advantageous options for students than when their online courses were originally constructed. These courses, originally mere correspondence courses with students receiving materials and submitting assignments through mail or e-mail, are admittedly out of date and in need of redesign based on contemporary research involving how

people learn online found in William Horton's book *e-Learning by Design*. This study will not contribute to an update of actual content, but will primarily focus on content delivery and student interactions. This is a huge transition process and the client understands there is an incremental nature to this rather than wholesale change across the entire program.

Introduction

The delivery mechanism of the online curriculum was evaluated as a research assignment by the research team of Karen Whelan, Stephanie Bossaller, Emily Millikan (team leader) and Scott Vonder Bruegge at the University of Missouri, students enrolled in IS_LT 9445 Formative and Summative Evaluation, a course that is part of the University of Missouri School of Information Science and Learning Technologies program with the assistance of their professor Dr. Julie Caplow.

The main sections of this report are purpose, methodology and results. The purpose section includes information on the background, audience and decisions affected by the reported results. Regarding methodology, this report includes information on the questions asked, the format and delivery mechanism for those questions, strategies used for obtaining data and definition of the research sample. Lastly, the report includes a summary of the findings and include the recommendations based on research conducted.

Background

Mizzou K-12 Online serves the state of Missouri as an online option for distance learning for the state's K-12 students. The original online courses were converted from former correspondence courses thus there was no real functional change. Theory and content/curriculum delivery have changed drastically, so the needs of the online environment need to change with them. It is also important for the evaluation to take into consideration any future changes and the flexibility needed for learners and educators in this environment.

In order to ensure these students are provided with quality learning environments and the same opportunities their peers are in the face-to-face classroom, a World History semester course, delivered through the Canvas Learning Management System (LMS), will be evaluated and feedback will be provided. This World History course was one of two for which the client requested an evaluation with another evaluation team focusing on a personal finance course.

Dr. Henry has requested that the focus of this evaluation not be on content but rather to examine the delivery of materials, interactions between users, use of various technologies and other aspects needed to bring this course up-to-date with current opportunities.

Purposes

The World History course will be evaluated by examining the organization, visual design and structure of the course. In addition, data will be gathered which will define

potential improvements to the learning resources, collaborative opportunities and teaching strategies which could improve student engagement and learning.

Audience/Stakeholders

The primary audience and stakeholders for this evaluation report consist of:

- Dr. Holly Henry (our client), an instructional designer-expert with Mizzou K-12 Online;
- Dr. Eric Hahn and Mr. Ronnie Hamilton, course co-directors;
- The administrators and staff of the College of Education Mizzou K-12 Online and MU High School.

Decisions

The following decisions may be influenced by the results of this evaluation:

1. Improvements upon and modifications to usability and navigation of the course.
2. Enhancement and addition of learning resources.
3. Application of enhanced learning strategies and collaborative elements for increasing student engagement.

Questions

The questions documented below will help establish the viability of achieving the purpose and goals of this evaluation.

1. What particular aspects stood out or could be enhanced facilitating the efficiency of the course organization and ease of navigation?
2. What strengths of the visual design are currently implemented or could use improvement ensuring the course communicates information clearly throughout the site?
3. What strengths can be identified or which aspects improved ensuring all modules and structure of the course are appropriate for student comprehension?
4. What recommendations can be made to enhance the current learning resources or add new features to optimize student learning?
5. What collaborative opportunities can be incorporated into the course to engage students in the learning process?
6. What innovative teaching strategies can be introduced to interactively engage students and their learning?

Method

The evaluation design and procedures needed for our purposes and to answer the questions identified required an expert evaluator, high school students and usability testing by expert reviewers.

The methods we used required access to the online course environment, Canvas, as well as access to students that fit the profile of those who could enroll in Mizzou K-12 Online. These methods also required communication with experts in the fields of collaborative online environments and effective online learning.

	Observation by Evaluator	Usability Expert Review	Student Questionnaire
What particular aspects stood out or could be enhanced facilitating the efficiency of the course organization and ease of navigation?	X	X	X
What strengths of the visual design are currently implemented or could use improvement ensuring the course communicates information clearly throughout the site?	X	X	X
What strengths can be identified or which aspects improved ensuring all modules and structure of the course are appropriate for student comprehension?	X	X	
What recommendations can be made to enhance the current learning resources or add new features to optimize student learning?	X	X	
What collaborative opportunities can be incorporated into the course to engage students in the learning process?	X	X	
What innovative teaching strategies can be introduced to interactively engage students and their learning?	X		

Sample

The sample size is limited by the access to users and those involved in the course. Access to current or former students of the course was restricted because of

privacy laws. High school age students not enrolled in the course were included in the sample as the only available source of feedback from subjects representative of actual students. Feedback from instructors was unable to be gathered as the course was not currently live and former instructors were not available for contact. The primary data source was our client, Dr. Henry and usability experts, as well as the course materials on the Mizzou K-12 Online website.

Sample Size:

- Instructional Design Expert: 1 - Dr. Holly Henry, an instructional designer for Mizzou K-12 Online learning and a certified quality matters reviewer, provided feedback as an observational evaluator.
- Expert Review: 3 - Three experts completed the usability evaluation on Mizzou K-12 Online. The participating experts were A.J. Million, a Mizzou Zone Mentor, Debra Bradley-Collum and Shann Bossaller, both students in the Mizzou SISLT program.
- Students: 7 - Adolescents from St. Louis were asked to evaluate the course. These students fit the profile of the type of learners who have access to Mizzou K-12 Online in that they are current sophomores and juniors in high-school.

Data Collection and Instrumentation

Multiple instruments were used in order to gather data on the evaluation target. These instruments provided the evaluators with detailed information regarding, but not limited to, course logistics, student engagement and appropriate tools from a variety of

perspectives. The feedback provided through this observation allowed the evaluators of the course to make recommendations and answer the questions outlined above. Once recommendations have been received, the client can make decisions on how to revise the online course.

Appendix A: Observation by an evaluator (adapted from Quality Matters Standards). The criteria the evaluator based her review on ranged from course logistics to aspects of the course that encourage student engagement.

Appendix B: Usability Expert Review - This review addressed aspects including: ease of use, navigation and instructional design elements. The experts consisted of an Interface Design Expert and two graduate students with a range of 4 - 7 year's experience.

Appendix C: Student Questionnaire - The emphasis of this instrument was directed towards the usability for learning resources and collaborative elements from the student perspective.

Data Analysis

Initially we transcribed our data into a form that promoted easier analysis. We did this by constructing a data analysis matrix where we detailed the strategies applied to each data source. Our two strategies, content analysis and thematic analysis, were applied to each of the three data sources. As trends emerged, we began to segment and code the data into not only larger content generalizations but also into thematic similarities. At that point we worked to determine any relationships between these

categories that indicated any sort of hierarchy to the issues that would generate improvement to the course.

Most questions within the instruments were rated on scales (see Appendices for specific scales). This allowed us to analyze the data based on those scales and compile the average ratings. Once average ratings were easily viewed, we were able to analyze which categories in the individual instruments were highest and lowest and which needed to be focused on the most. The qualitative comments provided by each reviewer provided specifics regarding the ratings and were also used to provide recommendations to the client.

Limitations

The results of this report have been limited by several factors. The evaluators did not have access to any current or previous students who have taken the course, nor will the evaluating team have the ability to view data relating to student performance in the course. Additionally, the instructors associated with the course are not available nor anyone associated with Mizzou K-12 Online other than Dr. Henry, who has offered to provide feedback as an evaluator. The evaluating team has identified a few usability experts in the online educator field and several Missouri High School students to provide evaluative data. However, their direct experience with the Mizzou K-12 Online system is limited to their review of this specific course only and will not be reflective of their experiences using it in a live active state.

The fact that content was not evaluated is indeed a limitation as content and delivery are difficult to separate out completely, however the client has requested the

study focus on *how* people learn online without adding the complexity of evaluating *what* people learn online.

Results

Summary of results from Observation by Evaluator:

In general, our evaluator found the course components acceptable in their current state. The main areas of concern related to learner engagement, interaction and overall instructor presence being all identified as unsatisfactory or in need of significant improvement. Currently, the course functions with no instructor-student interaction. All assignments are graded by a designated grader, not the instructor. Nor are there opportunities for student interaction with other students simultaneously taking the course or any type of engaged learning activities. Bolstering instructor presence and usage of course tools and media was suggested as an initial way to promote learner engagement while supporting course objectives. The complete results of the survey can be found in Appendix A.

Summary of results from Expert Usability Evaluation:

The results received from our usability experts highly rated the courses' cognitive load, knowledge space compatibility, and information presentation. The areas of navigation, media integration, and aesthetics rated lower. The reviewers' common complaints were there was not enough media integration to support a variety of student learning. It was pointed out that enhanced engagement could help facilitate a deeper

understanding of the materials presented. The complete results of the survey can be found in Appendix B.

Summary of results from Student Questionnaire:

The course received favorable reviews from our student population. The highly rated areas of the course were the course introduction, presentation style, defined online course expectations and accuracy of resource materials. Areas identified as non-favorable were ease of navigation, student interaction opportunities and expectations. Elements that garnered positive feedback comments were related more toward the LMS as a whole and the overall course structure (i.e. schedule & syllabus). Whereas, the improvement comments suggested increased media, simpler navigation to lessons and better visual appeal. The complete results of the survey can be found in Appendix C.

Recommendations

Based on the accumulated results we are recommending the following be considered regarding the Mizzou K-12 Online semester based World History course:

- Incorporation of more involved instructor presence, specifically inclusion of a section for the instructor to provide not only an introduction but welcome to the students enrolling in the course.
- Increased self-assessment activities where students receive immediate feedback (correct/incorrect) through games, simulations and other drill activities before actual graded assessments take place.

- In order to shift this course from correspondence/independent study, inclusion of increased instructor-student and student-student interactions should be developed. This could be accomplished through discussion board forums and student collaboration projects.

- The addition of descriptive image identification properties to ensure visual media is accessible for screen readers, which is currently non-existent.

- Consultation with a course design expert to assist with suggestions of reorganizing the paths to various materials within the course resulting in a simpler navigation system. This would ultimately minimize the number of "clicks" needed to find lesson materials.

- An increase in the number of images or other multimedia elements to further drive student engagement by enhancing learning as well as aesthetic appeal.

Appendices

Appendix A: Observation by Evaluators

The categories of the evaluation will assist in identifying the needs of the course and what decisions may need to be made.

The rating scale adapted from the National Standards for Quality Online Courses.
The questions adapted from the Quality Matters Standards Rubric for K-12.

Results from our evaluator are summarized in the below graph and included in-line with the survey questionnaire.
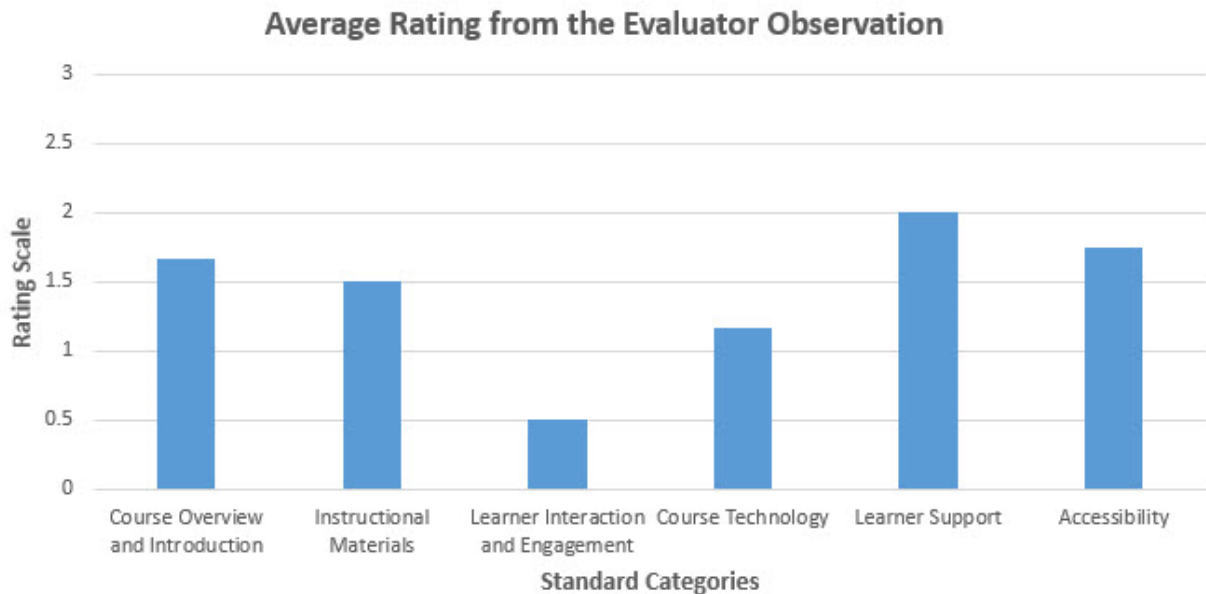
Before you begin the evaluation, please use the following information to access the World History course being reviewed:

https://mk12online-missouri.instructure.com/

Username= Wheval
Password = mk12online

Once logged in follow steps 1 and 2 below to navigate to the course:

After reviewing the course materials, please take a moment to complete the following evaluation:

Rating Scale
NA=not applicable
0=Unsatisfactory—needs significant improvement
1=Somewhat satisfactory—needs targeted improvements
2=Satisfactory—discretionary improvement needed
3=Very satisfactory—no improvement needed

Please provide comments for any sections where you selected a rating less than Very satisfactory.

Course Overview and Introduction	NA	0	1	2	3
1.1 Instructions make clear how to get started and where to find various course components.					X
1.2 A statement introduces the student to the purpose and structure of the course.				X	
1.3 Etiquette expectations (sometimes called "netiquette") for online discussions, email, and other forms of communication are stated clearly.				X	
1.4 Standards of academic integrity are clearly stated				X	
1.5 Minimum technical skills expected of the student are clearly stated			X		
1.6 The instructor provides a self-introduction.		X			
1.7 Prerequisite knowledge in the discipline and/or required competencies are clearly stated.	X				
Please provide any comments related to the **Course Overview and Introduction** section above.					

Instructional Materials	NA	0	1	2	3
2.1 The instructional materials contribute to the achievement of the stated course and module/unit-level learning objectives.				X	
2.2 The relationship between the instructional materials and the learning activities is clearly explained to the student.			X		
2.3 The instructional materials have sufficient breadth, depth, and currency.				X	
2.4 The instructional materials prepare students to meet state standards and/or other accepted content standards.				X	
2.5 The course content is culturally diverse and bias- free.		X			
2.6 All resources and materials used in the course are appropriately cited.				X	
Please provide any comments related to the **Instructional Materials** section above.					

Citations are provided on the credits page in the syllabus.

Learner Interaction and Engagement	NA	0	1	2	3
3.1 The learning activities promote the achievement of the stated learning objectives.			X		
3.2 Learning activities provide opportunities for interaction that support active learning.		X			
3.3 Clear standards for instructor responsiveness and availability are communicated to the student.		X			
3.4 The requirements for student interaction are clearly articulated.			X		
Please provide any comments related to the **Learner Interaction and Engagement** section above.					

As an independent study course, very little interaction with an instructor is provided. Students receive feedback on submitted assignments only from a course grader rather than an instructor. There is no student-student interaction since students will not be completing assignments on the same pace. It would be helpful to increase the types of practice activities that could provide computer-generated feedback to students. It could

also be possible to create assignments that require students to interact with someone local to them who may have expertise in the field, for example at a museum or a library. An assignment to conduct an online correspondence/interview with a student studying history in another country could be interesting as well.

Course Technology	NA	0	1	2	3
4.1 Course tools and media support the learning objectives and are appropriately chosen. Alignment			X		
4.2 Course tools and media support student engagement and guide the student to become an active learner.		X			
4.3 Navigation throughout the online components of the course is logical, consistent, efficient, and intuitive.			X		
4.4 Students can readily access the technologies required in the course.					X
4.5 Course design takes advantage of current technologies, tools, and media.		X			
4.6 The course takes advantage of technologies and tools that protect student confidentiality.				X	
Please provide any comments related to the **Course Technology** section above.					

Learner Support	NA	0	1	2	3
5.1 The course identifies policies and services for all students.				X	
5.2 The course instructions articulate or link to a clear description of the technical support offered.				X	
5.3 Course instructions outline how the organization helps students reach educational goals.				X	
5.4 Course instructions answer basic questions related to research, writing, technology, etc., or link to tutorials or other resources that provide the information.				X	
Please provide any comments related to the **Learner Support** section above.					
This information is provided in the syllabus, helpful resources section, and on the institutional web site.					

Accessibility	NA	0	1	2	3
6.1 Course accessibility information is provided along with guidance for obtaining student accommodations.			X		
6.2 Course pages and course materials provide equivalent alternatives to auditory and visual content.				X	
6.3 The course ensures screen readability and minimizes distractions.				X	
6.4 The course design accommodates the use of assistive technologies.				X	
Please provide any comments related to the **Accessibility** section above.					
The course does not require audio. Written materials are compatible with screen readers. General information about accessibility is provided in the syllabus. This could be improved by adding specific information within the course overview in this course. Alternatives to visual content include the use of alt tags for images, compatible with screen readers.					

Appendix B: Expert Usability Evaluation

Results from three usability experts are summarized in the below graph and included in-line with the survey questionnaire.
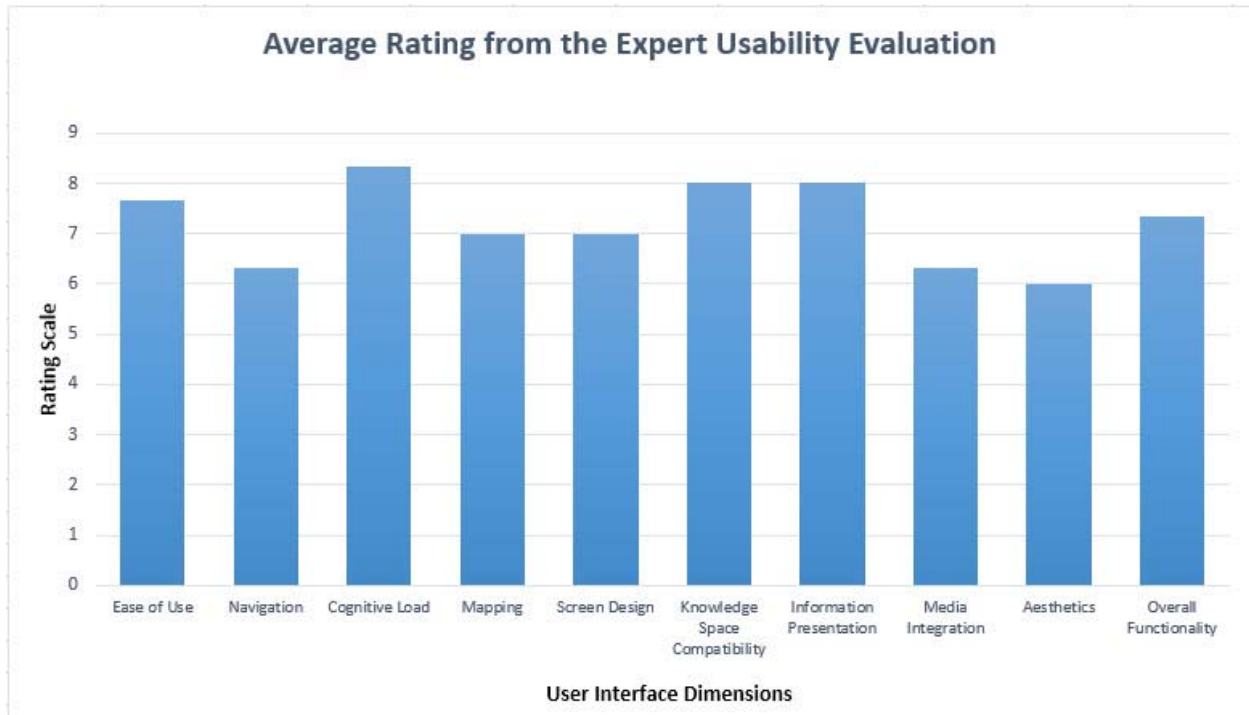
Before you begin the evaluation, please use the following information to access the Mizzou K-12 Online World History course:

> https://mk12online-missouri.instructure.com/
> Username= Wheval
> Password = mk12online

After reviewing the materials, please take a moment to share some basic information about yourself and you experience with on-line learning systems.

Evaluator Information
1. What is your area of expertise in evaluating online courses?
- ❏ Interface Design Expert **X**
- ❏ Content or Subject Matter Expert

- ❏ Expert in the particular learner population
- ❏ Implementation Expert
- ❏ Other (please specify) **X** Current graduate student in MU SISLT program **X** Education Technologist

2. How many years have you been actively working in your area of expertise?
- ❏ 0-1 years
- ❏ 2-4 years **X**
- ❏ 3-6 years
- ❏ 7+ years **X X**

3. Tell us your highest education level:
- ❏ Some high school
- ❏ High school graduate
- ❏ Some college
- ❏ College graduate **X**
- ❏ Master's degree **X**
- ❏ Doctorate degree
- ❏ Other (please specify) **X** Beginning work on Ed. Specialist degree

User Interface Rating Tool
These questions have been adapted from the User Interface Rating Tool for Interactive Multimedia © 1993 Thomas C. Reeves, Ph.D. & Stephen W. Harmon, Ed.D.

_____
Instructions: For each of ten user interface dimensions illustrated below, rate the MIZZOU K-12 Online World History Course on a 1 to 10 scale by selecting the appropriate number under the dimension. Please add any comments that may help to clarify or explain your rating. If a specific dimension does not seem appropriate to this program, do not select any numbers on the scale for that dimension and add a brief comment to explain your response.

1. User Interface Dimension 1 – Ease of Use

	Difficult	2	3	4	5	6	7	8	9	Easy
Ease of Use						**X**	**X**			**X**

Comments:
It was fine. I think the highlight of ease of use was in the "Module" section where all of the lessons were laid out in progressive and logical fashion. Keeping in mind the primary audience, K-12, I do wonder if better terminology could be used in that instance. Instead of "Modules" why not "Lessons"?
Icons are clear. Links are also clear. They're just a little hard to find.

The World History course offered by Mizzou K-12 Online is very easy to use. I believe that a first time online student would find it very easy to work through every aspect of the program, from logging on to finding technical assistance if it is needed.

2. User Interface Dimension 2 – Navigation

	Difficult	2	3	4	5	6	7	8	9	Easy
Navigation					X X				X	

Comments:

I do think better UX principles could be employed for ease and satisfaction of user access. For instance, on the left hand main navigation, If a user wanted to open "Materials" from the Syllabus tab they would have to jump to the Syllabus page first, THEN select "Materials". That process is 2 Jumps that could be 1 if the left hand main navigation had link drops for sub menus. There were a number of similar instances.

Navigation jumps around the page. Sometimes it's in the middle. Sometimes it's up top. Sometimes it's elsewhere. The "Get Started" link also threw me off. The slider with different units and images was nice, but I expected to select it using the slider and then click the "Get Started" button. Instead it brought me to a help page. I think there needs to be some way of bringing navigation together to help make the class more user friendly.

Navigation within the program is easily achieved. Icons make it very clear how to move from page to page. At stopping point, a page can easily be accessed through the module headings, avoiding page-by-page relocation efforts. Links to at the bottom of the pages to, among others, Facebook and Twitter, takes the user out of the online course and could result in a student becoming off task and loosing focus on the information to be learned in the lesson.

3. User Interface Dimension 3 – Cognitive Load

	Unmanageable	2	3	4	5	6	7	8	9	Manageable
Cognitive Load							X	X		X

Comments:

I think it's hard to fairly review this portion since the site seemed incomplete. While there was some content and structure, I didn't really see options for responses. The content and structure that was in place seemed logically progressive and in line with typical K-12 teaching style.

Very, very manageable. The course shell helps make this easy. The images and icons are helpful too.

Cognitive load is very easy to manage within instructional portions of the program. Some modules contain sections, chunking the information into meaningful parts. Reviews are expertly designed to allow

students to contemplate questions before clicking on the question to view anticipated response. Although a textbook was unavailable, it is easy to see how the textbook was integrated into the course.

4. User Interface Dimension 4 – Mapping

	None	2	3	4	5	6	7	8	9	Powerful
Mapping							X X X			

Comments:

The only area I noticed active mapping in the described sense was on the "Home" page where one could shuffle between lessons with an active indicator bar just below those lesson images. However, the only purpose the indicator bar seems to serve would be to more quickly shuffle between lessons which weren't progressively next to each other. The module section didn't really show what would happen once areas were complete. Once complete, would they change colors? Would some sort of icon indicator be displayed?

Within each "area" the mapping is clear. The problem comes when I moved to other parts of the course. Aren't assignments and learning units related? It's hard to map that given the current navigation layout.

The contents of each module can be easily accessed from menu on the left side of the screen. Pages of a section of a module are identified on each page. User has to go back to "Module" from the menu to determine their progress within the module. "Section #" and "Page #" listed at the bottom of the page could make it easier for the user to understand how much they have accomplished in a particular module. The home page allows the user to "Jump to any Lesson above or visit "Get Started" below," making it possible to avoid viewing the syllabus and contents of each module, even though there are indicators of prerequisite module progression. The detailed list of assignments in the syllabus lack dates and is out of order.

5. User Interface Dimension 5 – Screen Design

	Violates Principles	2	3	4	5	6	7	8	9	Follows Principles
Screen Design						X	X	X		

Comments:

There was nothing exceptionally poor or excellent with the UI Design. It was functional but had a dated feel. Examples include a minimal use of icons and buttons that were either basic or not used at all in favor of a simple active link.

Simple and effective. Maybe not something built by a graphic designer, but still it works very well and serves its purpose. This is online learning. Not art after all!

The screen design in the instructional portion had a monotone redundancy of a grey background, black text and black and white pictures. There were occasional colored pictures as the years progressed, but many of those used muted colors. The monotone palate lacked visual stimulation.

6. User Interface Dimension 6 – Knowledge Space Compatibility

Knowledge Space Compatibility	Incompatible	2	3	4	5	6	7	8	9	Compatible
							X	X	X	

Comments:

The information presented seemed to have a related and logical progression.

Good, but I think a more linear flow would fit the class. High School history is usually linear, based on dates, and structured. There's not as much critical reflection as there is in college. Since that's the case, and since the class is sequential and based on a schedule, it might be good to organize the knowledge space around dates and units in a more far-reaching fashion.

Information and pictures in each module correspond with the description of the module. Without access to a textbook, it was not possible to determine how the online information corresponded or supported the information in the text. Information presented in the online modules supported the objectives identified at the beginning of each module.

7. User Interface Dimension 7 – Information Presentation

	Obtuse	2	3	4	5	6	7	8	9	Clear
Information Presentation								X X X		

Comments:

This material was incredibly basic (matching the user audience) with a clearly related and logically presentation.

Good. The only issue I can think of is related to navigation. Finding a way to add more to the left navigation would be good and cut out the navigation in the page itself.

All of the information on the online is presented through text and illustrated with photos. Samples of the text measure a Lexile® score of 1200. Typical high school textbook have a Lexile® score of 1185. New Common Core State Standards have a range of scores, "stretch scores," to provide students text complexity to prepare them for college and career readiness. The sample score of 1200 places the reading complexity near the upper end of the 9th grade and near the bottom for students in 11th and 12th grades. A Lexile® score of 1200, not using the "stretch" matrix, place the complexity of reading at the top of the 11th grade through college and career readiness levels of education. Comprehension of the information in this course may be challenging for student in their freshman and sophomore years of high school.

8. User Interface Dimension 8 – Media Integration

	Uncoordinated	2	3	4	5	6	7	8	9	Coordinated
Media Integration				X		X			X	

Comments:

From what I could tell, media integration was minimal. The "Getting Started" portion of the site had helpful introduction videos for using the site, however, that section seemed to be the exception and not the rule of media integration. Looking through a number of lessons, the only media I saw was text. While text is necessary, it alone lacks the opportunity for enriched engagement. This is especially highlighted when other educational sites are so richly enhanced.

No complaints.

Audio and video files in this course were not used. The use of audio and video files in this course could have engaged the students in a deeper understanding of the material presented in addition to making the course more interactive. The lack of video and audio files in the information sections of the modules resulted in more of an online textbook than an online interactive course.

9. User Interface Dimension 9 – Aesthetics

	Displeasing	2	3	4	5	6	7	8	9	Pleasing
Aesthetics				X		X		X		

Comments:

Aesthetics isn't a term I wouldn't bother to associate with the site. It seemed like a basic template with a custom banner. It's not bad, just basic. It's a lost opportunity for professional presentation and branding, IMHO.

No complaints. Again, this isn't art. It's teaching. I'm sure there are ways to make it "prettier" but it wouldn't really enhance learning in my opinion.

Although there were relevant photos used in the modules, the lack of color in most of the text portions of the program made the aesthetics of this course neither pleasing nor displeasing. Referring back to Screen Design, aesthetics could have been enhanced with the use of color and a greater variety of picture sizes.

10. User Interface Dimension 10 – Overall Functionality

	Dysfunctional	2	3	4	5	6	7	8	9	Highly Functional
Overall Functionality						X		X		

								X		

Comments:

For a site representing an AAU level University and as such intrinsically linked to its branding, I think the site leaves much to be desired. The "Kahn Academy" site might be a good reference to take a look at. They are very well laid out and use media to great effect.

1. Aesthetics- This looks like a basic template with minimal effort to customize its aesthetic appeal. While the content is important, there is a perceived UX high satisfaction level when it appears builders have put extensive time and effort into even the smallest of details. Users perceive that detail and respond by associating a high level of importance and value to the product.

2. Student Interaction- I didn't really see any opportunities for students to interactively engage the topic in any forums. I've always found that helpful in terms of topic knowledge enhancement.

3. Front End Work- Along with the previously mentioned navigation enhancement, I would use this opportunity to again state the importance of lessons already viewed/completed have some sort of notice system. Currently, the lesson access links are colored green. Perhaps if lessons haven't been completed yet the links could be red with them only turning green once complete. Perhaps a checkmark icon could be included improving the perceived state of completion.

4. Responsive Design- Given the high number of users with mobile devices who depend on those devices as their primary method of web access, I think it's not only important to have this site as a fluid, Responsive design adapting to the device viewport, it's mandatory. When tested, this site was not Responsive.

Does its job. Just a little disjointed at times.

The overall functionality of the program (online component with textbook) does meet the objectives of the program, to provide high schools students information necessary to meet the objectives of defined in the course. It would be interesting to determine if addition of video and audio components could enhance the students' understanding of the information presented.

Appendix C: Student Questionnaire

The emphasis of this evaluation was directed towards the usability of learning resources and collaborative elements from the student perspective.
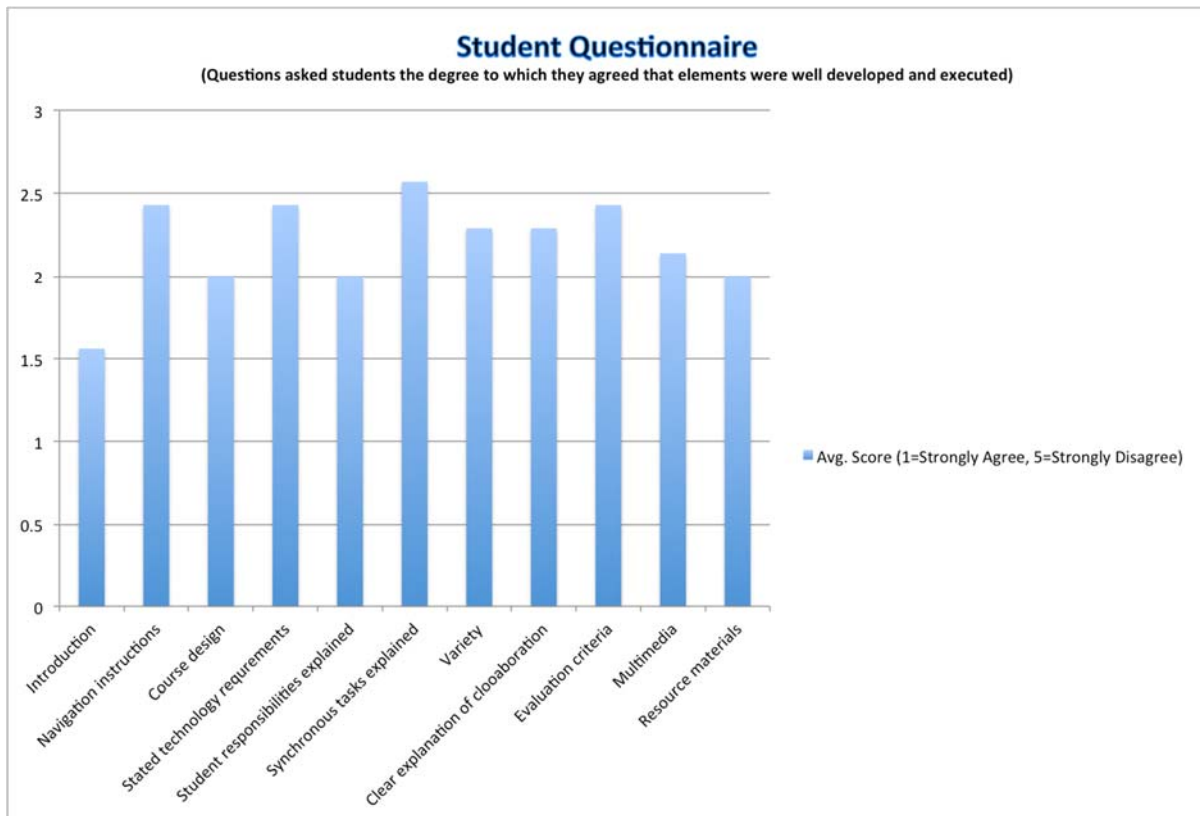
Questions were adapted from the following evaluative instruments:
- *Criteria for Evaluating the Quality of Online Courses* by Clayton R. Wright
- *Online Course Assessment Tool (OCAT)* from Western Carolina University:

Results from seven high school students are summarized in-line with the survey questionnaire.

_____

Quick view of results:

Detailed results:

Please take a few minutes to constructively provide your perspective by answering the following questions and be assured, ***all responses are anonymous and confidential***.

Thank you for taking the time to complete this very important survey.

Rating Scale
1=Strongly Agree
2=Agree
3=Neutral
4=Disagree
5=Strongly Disagree

	Average score
The course introduction included guidance on the structure of the course.	1.56
Navigational instructions made the organization of the course easy to understand and were transparent at the beginning of course.	2.43
Course design demonstrates user-friendly presentation style.	2.00
Course-specific technology requirements were stated.	2.43
Students were informed about their own responsibilities in online learning.	2.00
Students were informed which activities must be performed synchronously and which could be performed asynchronously.	2.57
A variety of instructional or learning activities were used to promote interactivity. *These may include online discussions, online conferencing, collaborative assignments, and listserv participation.*	2.29
Expectations were clearly specified for participation in collaborative or team-based learning activities.	2.29
Students were informed of the criteria that would be used to evaluate their participation in online activities such as discussion groups.	2.43
Illustrations, photographs, animations, and other forms of multimedia were used to present facts and reinforce concepts.	2.14
The resource materials were accurate, current, and related to the course content.	2.00

What aspects of the learning resources and/or collaborative elements do you feel were especially good?

The format works pretty well. Expectations are also pretty well defined.
It does a good job of walking the students through the process of signing up. It also enumerates the requirements pretty well.
The videos were very helpful. There was also ample info to look over.
Very detailed and specific readings that help you learn a lot.
The online resources and syllabus were helpful. I liked the calendar and how it was shown in the margin of every page so you can refer to it as you navigate the website.
They explained the overview of the course well.
The pictures and media elements helped me to engage especially well.

What changes would you recommend to improve the learning resources and/or collaborative elements of this course?

I would maybe add more images and visuals to the readings.
The design is a little dull.
The look of the site could also be better.
Adding more pictures or having a video option for the courses.
It was hard to find things, like the lessons. There were different paths presented and I had to try both to find what I was looking for.
The assignments could have been explained better.
Possibly make the user interface simpler but having more options on the home page.

Again, thank you for taking the time to complete the survey. Your feedback is appreciated as we assess our courses.

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