Instructional Design Final Project

Virtual Virtuosos

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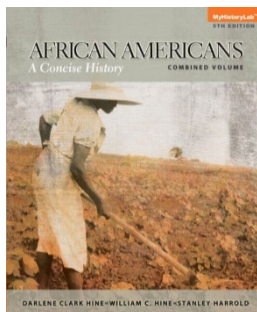
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Team Introduction

The team's name, Virtual Virtuosos, signifies our teams ability to cohesively and creatively collaborate to design, develop, and implement attainable strategies for any group in need of instructional design solutions. Margaret is a graphic designer and a seasoned educator with 15 years of face-to-face and online teaching. Nikki, with her human resource and elementary education background, brings her web design, programming expertise, and focused analytical and visionary perspective to the team. Deborah, a part-time professor, balances out the team with strong communication, leadership, and interpersonal skills. All team members are currently pursuing the Masters degree in Instructional Technology.

Project Course Description

The Black Experience (1954-Present) is the third course in a trilogy of 2-credit courses titled *Black Experience.* These courses are taught in three different periods: 1619-1877, 1877-1954, and 1954-Present, in seven a half weeks. They fulfill the University of Akron's general education requirements. The course tracks the plight of African Americans from Africa to America. If students decide to take all three sections in or out of sequence, they can still continue to use the same textbook, as the textbook is divided into the same eras as the course trilogy. While the design of the class is a lecture approach, the mode of teaching is group learning through chapter presentations. The chapter presentation and discussion questions are two out of five assessments used to gauge students' contact and understanding of the course material and required readings. The only assessments to test the students' knowledge of the

material are the chapter presentations, midterm and final exam. In looking at the needs of this class, it was evident that the instructor was intentional about the structure and delivery mode of the exams. Exams are comprised of questions and answers provided by the class, along with some multiple choice items that are chosen by the instructor. Exams are administered face-to-face, mid-semester, and at the end of the term.

The project's focus is to develop strategies and techniques to improve midterm and final exam scores of traditional students taking Black Experience 1954-Present class. From an accreditation standpoint, the program must show evidence that students have completed the required elements. A key component of this project was to use the A.D.D.I.E model and provide recommendations based on findings that would improve the midterm and final exam scores. Not only did we rely on the A.D.D.I.E model and our expert skill sets, we also required the knowledge of our Subject-Matter-Expert (SME), Dr. Sheldon Wrice, Professor of English and the Associate Dean of Multi-Disciplinary Studies and Diversity, and co-creator of the Black Experience course.

Analysis Phase

Identification of the learning problem.

Over the last three years, there has been a downward spiral with midterm and final exam grades of traditional students. Below is a chart with the Fall 2017 midterm and final grades of those who received a C- or lower.

Grade description	# Mid-term Grades*	#Final Grades*	Total
Received a Grade of C-	3	7	10
Received a Grade of D-	3	4	7
Received a Grade of a F	2	2	4
Total	8	13	21

*From Fall 2017 - Total class: 35 students

Statement of the learning goal.

The learning goal for this project defines the parameters by which we will measure the success of the students after implementing the instructional design plan. Learning goals must be specific and measurable so that gathered data will be representative of the success of the instructional design plan. The learning goal for this project is as follows:

When given the midterm and final exam for The Black Experience, 1954-Present, 90% of the enrolled students will earn an average (of both exams) with no less than 75% accuracy.

Needs Analysis.

- A review of the examination preparation of students is in order before the midterm and final exam dates.

- Ensure students have had more than one opportunity to review and access information that was given during and outside of class.

- Have additional tools accessible to students to help them study properly.

- Possibly create other alternative methods of administering the exams.

Learner Analysis.

Students in the program come from diverse, racial and social-economic backgrounds. In Dr. Wrice's current Black Experience 1954-Present course there are 35 students; approximately 27 men and 8 women. These students fit into one of three categories: 1) early college students (students who are taking general education college classes while still in high school), 2) traditional college students (students who are between the ages of 18-25, and are enrolled full or part-time), and 3) non-traditional students (students who are over the age of 25, have some work or life-long learning experience or may have some college or university credits and are currently attending the University). These students represent several majors and certificate programs in the College of Arts and Sciences, College of Applied Science and Technology, School of Nursing, School of Social Work, College of Engineering, College of Business Administration, and the College of Health Professions.

In order to achieve the learning goal, it is important to identify the steps that will guide students' behaviors toward achieving higher course information retainment and higher exam scores. For example:

1. Access to PowerPoint presentations and study questions outside of class. The instructor could post student PowerPoint presentations and the study questions from each group in a learning management system (that is easily accessible to students and easily managed by the instructor).

2. On weeks where there are no chapter presentations, the instructor could incorporate a quiz or use Kahoot to review the chapter information presented in the previous weeks as exam preparatory tools. If the instructor wanted to assign points to the quiz, points could

be redistributed from other assignments to smaller quizzes that could be part of the

formal course assessments.

3. The instructor could provide alternative means of test-taking like the use of Brightspace

   quizzes, Kahoot, Google forms or even use the university's secured test-taking center or

   lockdown browser.

Design Phase

    Task Analysis.

Students are divided into groups for chapter PowerPoint presentations. Each group is

assigned one chapter from chapters 21-24 to present to the class. As part of the presentation

criteria, students are assigned a presentation date with a list of discussion questions. The group

provides the instructor (via email) with the initial discussion questions that covers topics, events,

and themes from their chapter. These questions must be typed with the correct answers and the

text reference pages. The instructor reviews the questions submitted by the groups, revises, and

then selects the questions the students can use for their presentation.

Students must implement any revisions suggested by the professor before providing hard

copies of the questions and answers to the class on their presentation date. The discussion

questions provided to the class are questions that will be added to the midterm and final exams.

In addition to the questions submitted by the students, Dr.Wrice provides additional multiple

choice questions to each exam. Students accumulate a total of two sets of questions from

chapters 21 and 22 in preparation for the midterm exam and a total of two sets of questions from

chapters 23 and 24 in preparation for the final exam. On the day of the midterm and final exams,

students are given 90-minutes to complete the exam using pen and paper.

While the presentation was not the primary focus of this team's project, the discussion questions were crucial components since the discussion questions were the vehicle by which students collaboratively transmitted each chapter's material to the class. Also, it was the foundation for midterm and final examination preparation.

Theoretical Framework.

A good instructional design is connected to a solid theoretical framework to ground the design and provide direction. However, it can be difficult to narrow a focus to one specific theoretical framework as it relates to increasing exam scores and directing students' learning behaviors to retaining and recalling course information and applying the information. We believed Vygosky's constructivist learning theory was a viable and appropriate option for this project. Vygosky's theoretical approach has undoubtedly provided many teachers and students with tools that are embraced and utilized in the postmodern classroom. The basic tenets of the constructivist approach to learning and teaching are:

> The teacher is a facilitator and a guide who plans, organizes, and provides directions to the learner, who is accountable for his own learning. The teacher supports the learner by means of suggestions that arise out of ordinary activities, by challenges that inspire creativity, and with projects that allow for independent thinking and new ways of learning information. Students work in groups to approach problems and challenges in real world situations, this in turn leads to the creation of practical solutions and a diverse variety of student products. (Ozer, 2004)

Vygoskian approach.

There are several tenets from Vygosky's constructivist approach that are most appropriate for this design project. Known as Vygotsky's social constructivism, this theoretical framework considers the cultural and social context of the content, and the learners in the context of learning. For Vygotsky, the zone of proximal development, ". . . the distance between the actual development of a child as determined by the independent problem solving, and the level of potential development as determined through problem solving under adult guidance or in collaboration with more peers." (Vygotsky, 1978) This is most evident with this assignment in how students are divided into groups for the presentation but also as facilitators to create study questions to engage the class and to help prepare for the midterm and final exams. Vygotsky suggests that cognitive development is limited to a certain range at a particular age. However, with the help of social interaction, such as assistance from a mentor, students can comprehend concepts and schemes that they cannot know on their own. Curriculum specialists and lesson plan builders can use the zone of proximal development as a guiding reference. This theoretical framework proves to be supportive of this project's goals, as the instructor has designed the classroom experience to be collaborative with dividing students into groups to present the required course information.

Documentation of the project's instructional, visual and technical design strategy.

It was noted in the task analysis phase that the students are divided into groups and that each group is responsible for creating discussion questions for the chapter of the text that they are assigned. Each team is then required to design a presentation of the information from that chapter. Our team discussed the probability that the students do not read all four chapters of the textbook, in depth, to gather the knowledge that they need to do well on the midterm and final

exam. The acknowledgement that the presentation was crucial to the assessment and teaching strategy of this course was necessary. However, our team focused solely on assessment strategies, study preparation, accessibility to course resources outside of the classroom, and alternative means of administering the examinations.

Designing instructional strategies that engage the students when reading the text is one of the main aspects of this instructional design project. Students who have a purpose and are engaged in an activity while reading is a reading comprehension strategy that we believe will encourage the students to read all four chapters.

The reading strategies will include, Venn Diagrams, Story Maps, Outlines, and other graphic organizers. Providing the students with a study guide for each chapter will help them focus on the important information that is in the text. These extra materials will be posted in Brightspace for the students to access throughout the course.

The use of short informal quizzes, that reflect the questions used on the midterm and final exam, will be implemented for each chapter. These quizzes will have 5 multiple choice questions and one or two short answer questions. The team has suggested using online media for these quizzes. Online media will gather the data and generate a report on the progress of each student. This will be helpful when tracking success for the instructional design plan. The purpose of these chapter quizzes is to help the students become familiar with the midterm and final exam questions and to hold them accountable for the material that is contained in each chapter.

Storyboard.

After the initial meeting with the SME, recommendations were made to help the SME better engage students with the course material and to provide additional academic support and

access resources outside of class. The storyboard is to the design team as blueprint is to construction workers, a conceptual road map to the delivery of the finish product.

The design team outlined several key objectives with corresponding tasks and organized these objectives and tasks chronologically. After identifying the primary objectives that aligned with the technological, instructional, and pedagogical framework, a storyboard was constructed along with a mock syllabus outlining the implementation of the objectives and tasks. The link below is the storyboard that was provided to Dr. Wrice after the initial consultation meeting.

- Black Experience 1954-Present I.D. Storyboard

The objectives were ordered from first to last choice and were assigned corresponding tasks that pointed to the achievement of the overall goal. For each objective and corresponding task, a technological recommendation was made to support the objective and the task for the instructor and the student. Listed below are the four objectives identified by the instructional design team:

Objective 1-Provide study strategies to help students study for exams. Four tasks were designated to this objective.

- Task 1: Provide examples of study strategy resources.

  - 9 Interventions That Improve Student Test Scores

  - Studyguides and Strategies

- Task 2: Encourage students to form study groups.

- Task 3: Generate study questions or use the instructor's guide to formulate study questions for students to answer for each chapter.

- Task 4: Choose a select number of study questions assigned to students for quizzes and exams.

Objective 2-Create informal assessments that complement and prepare students for formal midterm and final assessments.

- Task 1: Informal quizzes can utilize the same format as the midterm and final exam.
    - Quiz 1 given in Week 2 to review Chapter 21 information.
    - Quiz 2 given in Week 3 to review Chapter 22 information.
    - Quiz 3 given in Week 5 to review Chapter 23 information.
    - Quiz 4 given in Week 6 to review Chapter 24 information.
    - Points could be assigned to informal assessments.
    - Redistribute points from a current assignment (Example: Presentations = 100 points, assign quizzes a total point value of 40 and Presentations 60)
- Task 2: Formal exams would maintain same format, same scheduled dates, and same point values.

Objective 3-Differentiate test taking.

- Task 1: Provide some alternative test-taking opportunities that are secure and that can be done face-to-face, and requires the use of no notes.
    - Lockdown (Secure computer-based test center)
    - Paper/Pencil
    - Quizlet
    - TopHat
    - Brightspace Quizzes
    - Kahoot
- Task 2: Take the sample Kahoot quiz module provided.

Informal Assessment Prototype.

An informal assessment was created using Kahoot. This prototype was meant to provide

the SME with an example of how an informal assessment could be used in the classroom.

https://kahoot.it/challenge/0917742   Game Pin 0917742

Objective 4-Provide key and supplemental resources accessible to students outside of class.

- Task 1: Identify an easily accessible learning management platform for the instructor and

  student to use.

- Task 2: Post each group's PowerPoint presentation and discussion questions with

  answers in the learning management system.

- Task 3: Post video links, podcasts, active timelines, and research stats (associated with

  each chapter in class) that connects a main event/theme in Brightspace as part of the daily

  reading assignment outside of class.

  - Examples:

    - http://www.pbs.org/race/002_SortingPeople/002_00-home.htm

    - https://www.history.com/topics/black-history/civil-rights-

      movement/interactives

    - U.S. History- PreColumbian to New Millenium

Development Phase

Simulated Learning Management System: Using Wix.

Initially, the team did not design a user interface, however, the design team did research and

recommend some key tools that could be incorporated to support the constructivist teaching

approach and design of this course. These tools included: Quizlet, Kahoot, and the learning

management system Brightspace quizzes. Secondly, Dr. Wrice expressed a strong interest in

utilizing Brightspace, the University's learning management system, as a technological tool and

home base for students to stay connected to the class and access key tools and resources. Dr.

Wrice indicated that the use of Brightspace seemed appropriate for him as the instructor and for

students. Most students were familiar with the learning management system and there are

training modules, videos, and other tutorials that the instructor could point students to if they

needed additional assistance with accessing all or parts of the learning management system. As a

result, our team decided to build a prototype learning management system that simulated

Brightspace.

Prototype for Brightspace.

A mock Brightspace site was created in Wix to simulate a technological source to organize

the course content, tasks, and assess students' learning and performance. Click the following link

to access the site: https://margar336.wixsite.com/blackexperience

Implementation Phase

The implementation phase will consist of two parts. First, training the SME on parts of the

learning management system (LMS) and the management system modules to ensure: 1) a clear

understanding of the LMS navigation and function 2) to help devise a plan to teach students how

to navigate the LMS and access resources from different parts of the LMS 3) to help students

track their progress with the LMS. The implementation phase will occur over a series of eight

weeks after the semester has ended, per the preference of the SME. The SME's projected

implementation phase is:

- May 2018-June 2018: Training the SME on the simulated learning management site

- June 1, 2018-June 15, 2018: Create LMS for Fall 2018 class

- June 16, 2018-June 25, 2018- Test LMS assessments and accessibility using student focus group

- July-1-July 15- Implement changes to the University of Akron's LMS in preparation for the Fall 2018

- July 15-July 22- Have students test out the LMS and provide feedback using an open-ended survey examining content and ease of access to the course information.

- July 23-July 31- Update/change the information in the LMS and do a second test of the LMS

Assessment Plan.

Initial contact with the SME identified two key components of assessments, which were the midterm and final examination. During the first face-to-face consultation meeting, it was suggested that more informal assessments be given to help students prepare for the midterm and final exams. Another suggestion provided to the SME outlined different evaluation methods which included the use of online tools and media that could track student access of materials, as well as provide immediate feedback on assessments. Last, open ended evaluations would be provided to students to give feedback on ease of course material access, readability, and connection of the course material. However, after the initial meeting with the SME on March 7, the SME followed up with the communication liaison on March 19, and expressed a desire to implement assessments changes and the suggested new instructional design in Fall 2018.

Description of the Timeline.

| March 6 | Team selections were posted by Professor Savery |

| March 7 | Original kick-off meeting with Subject Matter Expert |

March 14	Virtual Virtuosos reviewed notes from the subject matter expert and proposed objectives, tasks, and a storyboard for Dr. Wrice and submitted storyboard for SME to review and consider what was going to be used this current semester and what will be used for the following semesters
March 19	Virtual Virtuosos followed up with SME to review the storyboard and gain insight on the next steps of the design phase for the SME
March 23	Provided SME with study guide questions for each chapter to assign to students presentation groups
April 2	Designed a simulated learning management system using Wix; providing visual and functional aspects of the instructional design team's assessment recommendations
April 22	Share the prototype learning management system with I.D. team providing consulting the SME on student groupings for chapter presentations.
April 22	Share the prototype learning management system and the chapter study guide questions and answers with the design team working on the chapter presentation for the SME
April 22	Provided complete formal written report of instructional design team project

Evaluation Phase

Since we were unable to execute our instructional design, we will speculate the outcome for the purposes of this report. Members of the target audience were used and were similar to the statistics of the class when instruction was first being developed. Surveys were administered to collect data about the use of our instructional design from the professor and student point of view. Example survey:

1-Not at All 2-Somewhat 3-Neutral 4-Moderately 5-Very					
	1	2	3	4	5
1. How accessible was the tool?					
2. How effective was the tool in helping you study?					
3. How enjoyable was the tool to use?					
4. How likely are you to use the tool again?					
5. List two (2) pros/cons of the tool. Pros: 1. 2. Cons: 1. 2.					

Part One.

The plan consists of assessments that measures both formative and summative evaluation.

Formative.

We will be able to receive immediate feedback from using the Kahoot formative assessment and quizzes within the learning management platform since they correlate the data immediately after the quiz. We would also take the opportunity afterwards to ask the students how they felt about using this type of assessment as a tool and record informal notes of their feedback. This type of discussion based informal assessment could be used for gauging how well the learning management platform, with its quizzes and supplemental study resources are being received by students.

Summative.

If the SME chooses to give the students the option to take the midterm and the final exam via paper and pencil test or through a lockdown style test taking site, we will be able to see if there is a difference in scores through the two different test taking methods. The data for the traditional paper and pencil tests will have to be scored and the data entered into a spreadsheet for further review. The tests given through secure based testing would allow for the data to scored and recorded with the exception of the essay portion. The overall performance of the instructional design would be determined at the completion of the semester when all the data collected from formative assessments, formal and informal, and summative assessments has been reviewed, hopefully with positive results.

Part Two.

The primary downfall of the instructional strategies that we have designed would be technology. From experience, we can project that it is not always 100% reliable, easy to learn to use, or user friendly to all. Therefore, we recommend giving options and being prepared to use alternatives when necessary.

After collecting the data from our formative and summative assessments, we could find that we see no change at all, therefore we would still be missing an important aspect of why students are not doing well on their exams.

Recommendations for Changes.

In regards to a technology tool failing, it is best to have an alternative method. While technology can enhance teaching, it is not always reliable and this can be frustrating. We would add in simple alternatives that would reach the same outcome without the use of technology in the event that it fails. If we had to reassess our design because our goal was not met, we would

have to try to determine specific areas for improvement, and try methods that would potentially

result in a better outcome. For instance, if we could not foresee students who simply lack

motivation to do well, it would result their outcome not changing no matter what we do. There

are no more steps that can be taken, but, at least one additional problem would be identified,

whether resolved or not.

Conclusion

As a team we feel confident that our design will help improve test scores for the midterm

and final exams in the class, The Black Experience (1954-Present). Even though we were not

able to see the results of implementation this semester, we will take the initiative to follow

through with the SME after the Fall 2018 semester so that we can analyze the results.

References

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