Project Background

USF College of Public Health

Lifelong Learning Academy

Micro-Learning for Measurable Impact

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Project Background

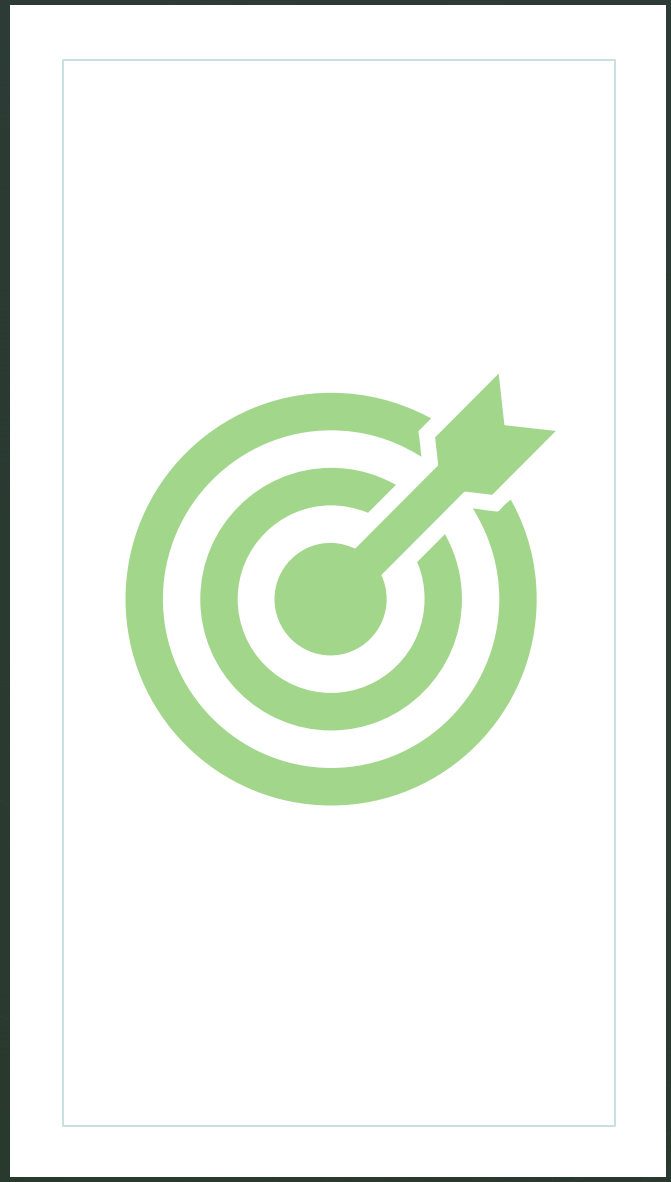
- The COPH Lifelong Learning Academy developed a wide range of continuing education and workforce development computer-based training (CBT) modules during the COVID period to meet the growing need for online development. The client would like to modernize their offerings to enhance the course design, interactivity, presentation format, and assessment methods of their CBT.

Project Background: The project will include the following deliverables

- A Storyboard
- Prototypes
- Alpha & Beta Testing
- interactive elements
- improving video content
- adding new audio files provided with closed captioning
- updating the CBT to match USF's style guide whenever possible.

Target Learners and Project Goals

This CBT targets professionals needing continuing education credits or adult learning who are expanding their knowledge-base, though not pursuing a degree . These learners tend to be goal-oriented, practical, and more self-directed than traditional adult learners. The deliverables and learning objectives consider the limited time/schedule these adult learners have; while providing them the same quality product they would receive from a traditionally scheduled course. These learners will likely spend 1-2 hours on this module and the deliverables should be appropriate for this time and audience.



Learning Objectives

The Global Disasters Micro-Module has three main learning objectives

- to recognize the classification of disasters and humanitarian emergencies
- identify and apply the lens of equity and justice through the steps of disaster management cycle
- apply complex adaptive systems framework in the study and management of disasters.

Instructional Challenges

- **The greatest challenge that we encountered was that the content and audio itself could not be edited or updated, so the project focused instead on the look and feel of the CBT.**
- **The availability of the client lead also presented a challenge at the onset of the project and during project development.**
- **Manipulating the images so they displayed appropriately was a challenge**.

Theoretical Framework: Design-Based Research

Prototyping: An early and rudimentary version of this CBT was created and used to identify issues with the structure and direction of the training to guide the development of later iterations.

Iterative Design: Following the initial prototype, the development of this CBT underwent numerous iterations that relied on feedback from clients, students and our instructor. This input was used to further refine and develop through a process that yielded improvement with each iteration.

Collaborative Design: Clients, end-users, and Instructor were utilized to provide feedback on the course's usability and effectiveness.

Reflective Design: Following each design iteration, the designers would reflect on the areas of success and needs for improvement to guide the next iteration to make it more effective, engaging or better aligned with learning needs.

Theoretical Framework: Instructional Design Approaches and Learning Theories Guiding the Design

The initial plan was developed with three key frameworks utilized as the foundation for content and design.

Constructivism: We intended to develop active learning experiences where the participants are engaged in building their own understanding, and it is related to real-world situations relating to global disasters and complex humanitarian emergencies.

Cognitive Learning Theory: Cognitive Learning Theory was to be utilized by incorporating activities that support development of metacognition where learners problem-solve and make predictions of real-world situations that increase personal relevance, engagement, and deeper understanding.

Connectivism: was integrated throughout the training though digital interconnectivity and fostering a greater connection to the content through the exchange of ideas, reflection, and critical analysis of the information.

Theoretical Framework: Instructional Design Approaches and Learning Theories Guiding the Design

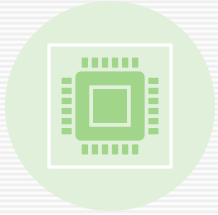
- After moving to the development phase of the project it was revealed that the content and audio itself could not be updated. This limited the use of Constructivism throughout the project. Due to legal concerns and difficulties with students not being able to “infer” text instruction when audio instructions had been used throughout the CBT scenario-based assessments and activities were considered non-viable and development shifted to other forms of interaction.

Theoretical Framework: Instructional Design Principles

Multimedia Principle:
Words and graphics were used rather than use of words alone to support transfer

Spatial Contiguity Principle: Printed words were placed near corresponding part of graphic to reduce extraneous processing

Signaling Principle:
Cues were added to highlight the organization of essential content to call to attention the important information



Redundancy Principle:
Graphics and narration were utilized to support deeper learning of material

Segmenting Principle:
Information was unveiled in learner-initiated segments rather than a continuous unit to allow the student to focus and process the information before moving to the next segment

Design and Development Process

Platform: Articulate 360

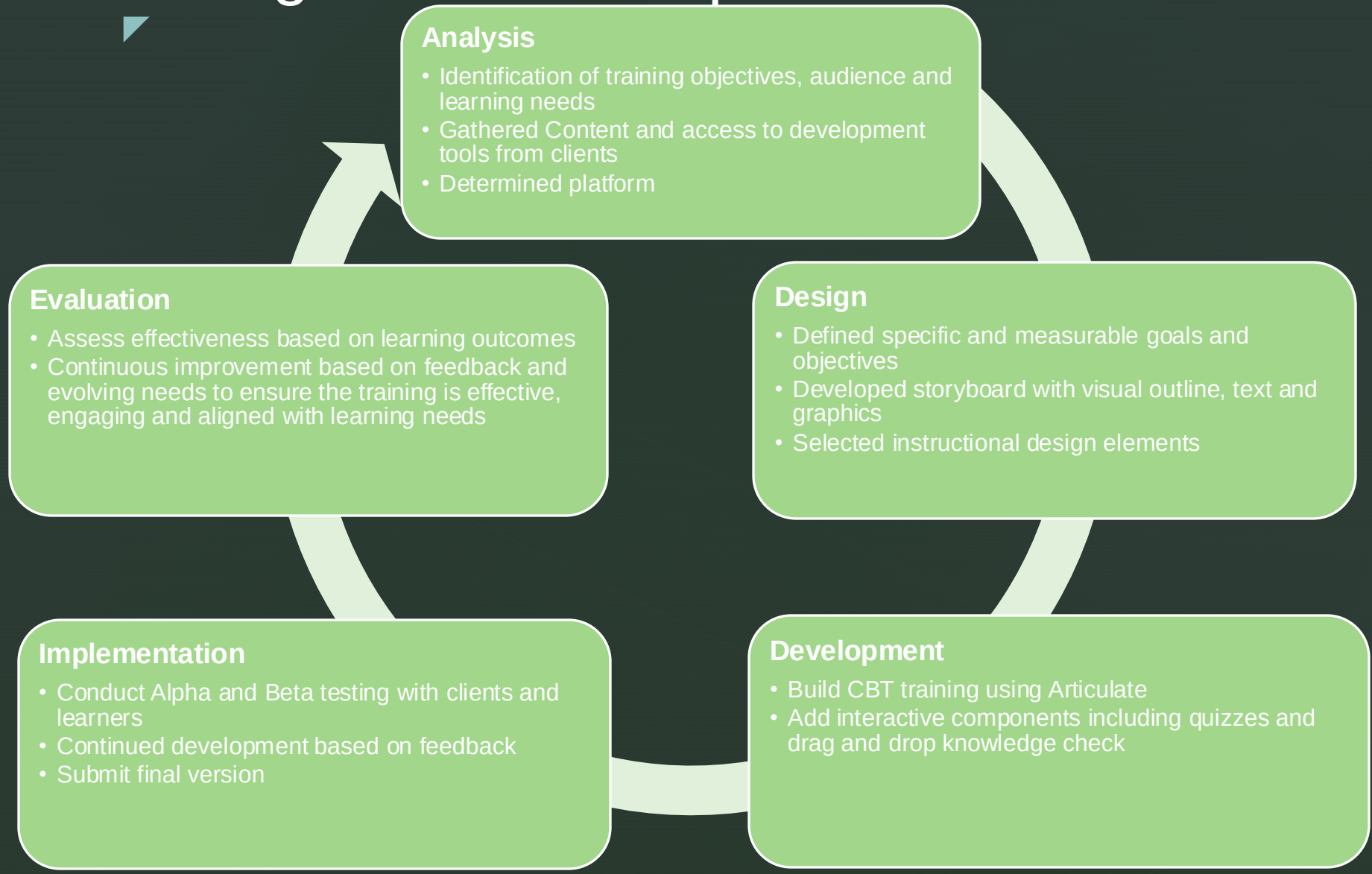
Roles:

- Liz established the initial product framework using Canva and migrated it to Articulate.
- Iterative development of training was a collaborative effort.
- Assignments were created collaboratively, involving shared development.

Team Collaboration:

- Weekly Check-ins via text or Teams meetings.
- Shared documents were utilized for real-time updates and co-development of notes, documents and presentations.

Design and Development Process



Iteration: Alpha Test

Purpose: The initial client evaluation helped to determine if the direction of the project was meeting the customer needs. This evaluation gave us a chance to make modifications as needed and allowed for redevelopment with customer input. Since the content itself wasn't being developed, instead the evaluation focused on Level 1 usability, design, and overall content readiness.

Participants: Our participants will be our two clients, Danielle Secker and Mary Keyhani. As the two sponsors of the project, their input was the most valuable at this stage.

Method: We used a digital survey created through surveyplanet.com. We also relied on feedback provided through earlier email correspondence.

Alpha Testing

Alpha Test Findings	Feedback Provided	Modifications
Usability	The survey feedback was mixed, and two questions indicated problems to be addressed. Both clients disagreed with the statement that the product functions well across different devices and browsers, and one client disagreed with the statement about loading times being satisfactory. There were no comments made in the e-mail relating to usability.	None made
Appropriateness	The clients agreed with all comments regarding appropriateness of the content and there were no comments regarding appropriateness of the content in the e-mail.	None made
Instructional Design Strategies	Instructional Design Strategies: The clients had opposing opinions on two of the statements with one disagreeing and one strongly agreeing on the activities effectively engaging the learners. Both clients disagreed with the statement about the product incorporating a variety of media effectively. The email provided much more valuable feedback in this category than the survey. The client email suggested a number of design strategy development opportunities including: • More graphics • Interaction instructions • Breaking up audio • Use of varying actions • Application of consistent text spacing and sizing • Development of knowledge check answer follow-up	• Added graphics, interaction instructions and introductions • Checked aspect ratios on images but were unable to identify source of problem • Modified seek bar visibility • Cleaned up text to provide cohesive design • Developed knowledge-check answer support • Ensured each slide was titled • Reworked drag-and-drop
Accuracy of Content	Both clients answered either agree or strongly agree to each of the statements relating to accuracy of content and there were no additional comments in the email that would suggest there was a need to revisit this further.	None made
Alignment of Learning Activities with Learning Objectives	The client feedback was mixed with two of the statements related to alignment to learning objectives. Number 19, The assessments effectively evaluate the attainment of the learning objective was answered agree by one and disagree by the other. Number 20, The level of difficulty for activities and assessments is appropriate for the stated learning objectives, has one responded strongly disagree and the other as agree.	Developed the knowledge-check answer support to reinforce learning

Iteration: Beta Test

Purpose: For this evaluation we focused on the usability of the product Levels one and two of the Kirkpatrick Model for evaluation. A leading focus of this evaluation was the training's alignment to the key objectives that the client is concerned with, giving us vital feedback to support the last edits to the CBT.

Participants: For our evaluation we used four participants that represented a wide range of ages and backgrounds.

Alexander Soodak, age 29

Evan Grabowski, age 21

Kyla Womack, age 20

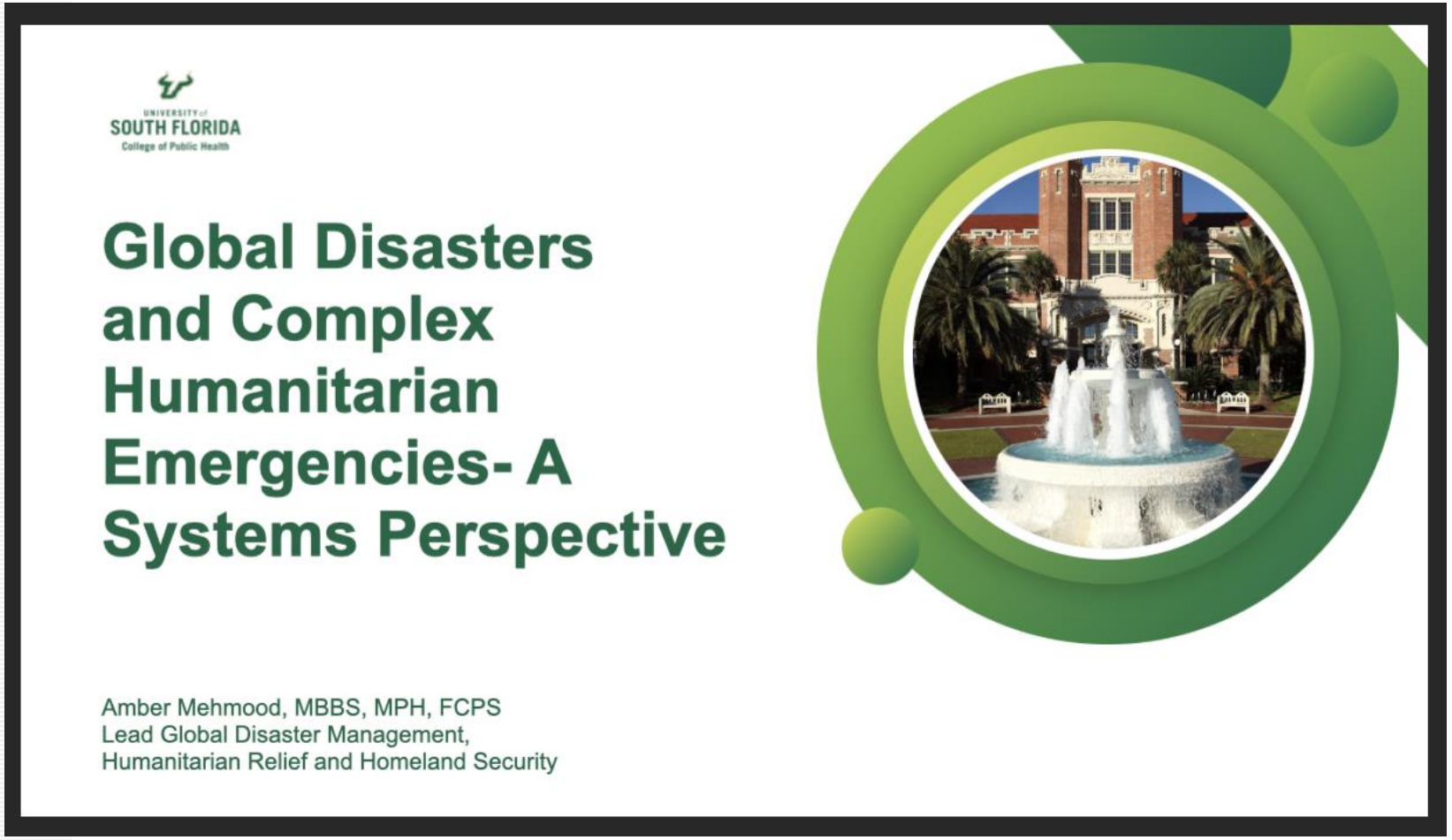
Chester Grabowski, age 57.

Method: The one-on-one observation was performed while sitting with the participant. They tested the CBT on a provided computer, using the Articulate testing environment. The participants were instructed to make comments/ask questions throughout the observation. The group members used the observation tool at the end of this document to note behavior and performance. The participants will complete a questionnaire at the end of the experience to capture more precise Level 1 and Level 2 evaluation data.

Beta Testing

Beta Test Observations	Feedback Provided	Modifications
Most Participants (3)	Mentioned the lack of interaction instructions left them feeling confused as what to do in many slides	Integrate instructional graphic that guides the user to interact with necessary components on appropriate slides
All Participants (4)	Expressed that the audio voice and speed were generally disliked	None possible
One Participant	Was surprised there would be an assessment for the training	Considered including a slide informing the learners of the upcoming assessments but decided anyone taking the course for credit would make that assumption
Most Participants (3)	Said they either did not like the speed the slides were presented or did not like the inability to advance the slides themselves.	Changed the slide advance settings so the user was the one to decide when to advance to the next slide.
One Participant	Shared the audio and visual information were revealed in reverse which was confusing	Unable to modify this graphic or the related audio.
One Participant	Found the long pauses in the slides to be very frustrating and disengaging	Edited the audio wherever necessary to remove silence at the end
Most Participants (3)	Were confused when completing the final knowledge check question because there was no conclusion slide	Created a slide concluding the training

Final Product Illustrations



Final Product Illustrations

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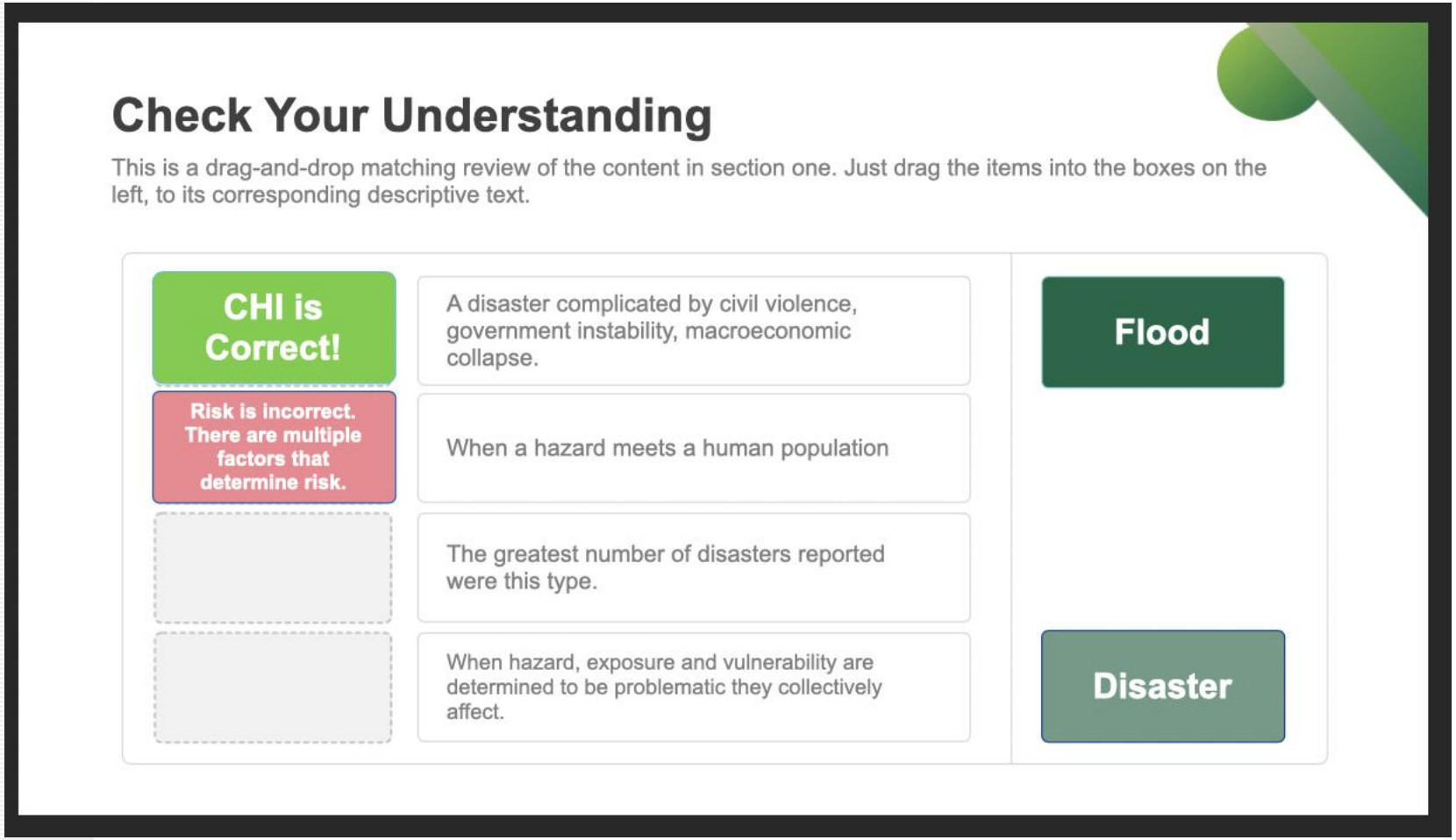
Are Disasters Always Unpredictable and Unpreventable

Disasters caused by natural hazards may be unprecedented but not always unpredictable and hence a function of the population at risk

Disaster risk is defined as the likelihood that damages will overwhelm the ability of the affected community to respond in a specific period of time, determined probabilistically as a function of hazard, exposure, vulnerability and capacity.

Final Product Illustrations



Final Product Demo

CLICK TO OPEN THE COMPLETE TRAINING MODULE

UNIVERSITY of
SOUTH FLORIDA
College of Public Health

Discussion of Results

Through thoughtful design, we were able to modernize the Academy's CBT offerings, creating an engaging, interactive learning experience that met both the instructional goals and the constraints of the project. As the designers for the COPH Lifelong Learning Academy, we were tasked with modernizing their computer-based training (CBT) modules originally created during the COVID-19 pandemic. The goal was to enhance the course design, interactivity, presentation format, and assessment methods, but we had to work within certain constraints—most notably, using pre-recorded AI voiceovers and maintaining the original content in its entirety.

Discussion of Results

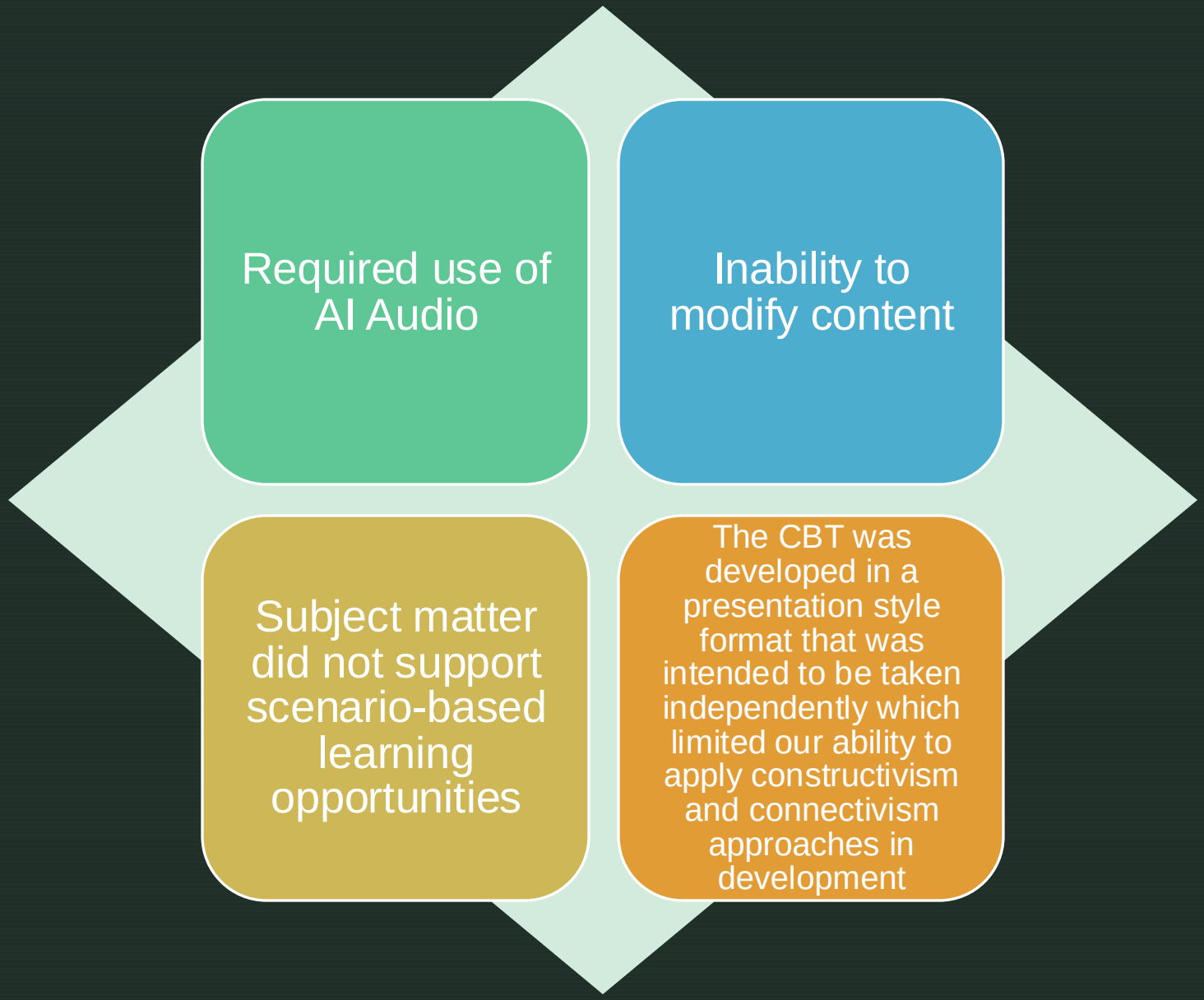
To meet these challenges, we first focused on improving the presentation format. We introduced updated visual elements like dynamic graphics, clean layouts, and intuitive navigation to ensure the courses felt modern and engaging, even with the static AI voiceovers. Carefully selected visuals were used to complement the audio, avoiding any redundancy while enhancing comprehension and interest.

Next, we incorporated interactive features to foster greater learner engagement. We designed interactive aspects like hovering elements, animated information cues, drag-and-drop activities, and the use of explanatory feedback. These allowed learners to actively participate in the content rather than passively absorb it, which was especially important in maintaining attention and reinforcing key concepts.

Finally, we restructured the assessment methods to align with the static nature of the content while enhancing interactivity and learner engagement. To further engage learners, we included knowledge check assessments to reinforce learning. These activities provided immediate, informative feedback, helping learners understand why certain answers were correct or incorrect, guiding them toward a deeper understanding of the material.

Additionally, the assessments were designed to offer constructive, context-sensitive responses. This immediate feedback loop allowed learners to track their progress, build confidence, and solidify their understanding of the content. By ensuring that these assessments were seamlessly integrated into the course flow, we were able to create a more interactive and dynamic learning experience without altering the original course materials.

Limitations



Recommendations for Future Design and Research

REWRITE CONTENT TO ALIGN WITH THE TARGET AUDIENCE

INCORPORATE LOCAL EXAMPLES MAKING CONTENT PERSONALLY RELEVANT

AUDIO SHOULD BE RERECORDED USING A HUMAN VOICE ACTOR TO SUPPORT THE VOICE PRINCIPLE

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