



(OpenAI, 2025)

Citation Cipher

Final Design Document

Kat Abe & Kylie Gross

Department of Education, The University of Tampa

EME 607: Introduction to Instructional Games and Simulations

Dr. Suzanne Ensmann

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Premise

A rogue hacker has infiltrated the prestigious Academia Library, causing chaos by corrupting and distorting thousands of academic citations in the library's database. The APA citations are scrambled, footnotes are missing, and references are completely out of whack. As a citation expert, it is your mission to dive into the digital systems and fix the broken references before the library's reputation is ruined. Solve puzzles, track down the hacker's digital footprints, and restore order by repairing the APA citations. But be careful – the hacker has left traps, and time is running out!

Hook

Can you outsmart the hacker, fix the APA citations, and save the library from academic disaster? The fate of the library depends on you!

Target Market

The target market of our game is upper-level high school students, college students, and graduate students. Players may have some basic knowledge of APA 7th edition citation rules, but this is not a required skill to play the game. Players may need basic English proficiency to play the game, as this is not available in other languages.

Genre

Citation Cipher is classified as a “serious game.” Serious games serve two purposes: (1) to be fun and entertaining, and (2) to be educational (Bellotti et al., 2013). The game also fits into a hybrid genre of 2D Platform and puzzle games. Puzzle games typically involve pattern recognition and understanding processes (Adams, 2014, p. 78), for this game, this means identifying patterns in citations and applying APA rules to fix them. Inspiration was drawn from 2D Platform games like *Super Mario Bros* and *Castle Crashers* because these games are widely popular and visually appealing to the target audience. 2D Platform games involve the use of a two-dimensional character with challenges including timers, navigation, and hand-eye coordination (Adams, 2014, p. 71). This aligns with *Citation Cipher* where the player navigates a library environment, moving across platforms, jumping up and down to collect icons, and searching for citation-related puzzles to solve.

Game Rating

According to the Entertainment Software Rating Board, this game would be Rated E for Everyone. This content is generally suitable for all ages and contains minimal cartoon violence (Entertainment Software Rating Board, n.d.).

Narrative

Opening Scene

You are sitting at a desk at *Academia Library*, surrounded by other students who have their noses buried in books and laptops, working on their assignments. It is relatively quiet, with only the soft hum of whispered conversations and pages turning. Academia Library is a revered institution known for its extensive digital database – a perfect environment for research. You're just about to dive into your project when suddenly, your computer screen flickers. A 404 Error flashes across your screen, followed by another. The error messages keep coming. It's not just a malfunction, something is wrong . . .

A loud beep interrupts the silence. The intercom system turns on, and the IT department says: "Security breach detected in the database. A hacker is inside. We've lost control." On the screen, you see scrambled, broken citations – APA references twisted and out of place, and footnotes missing. Before you can react, the computer screen goes black for a moment and then a message appears in bright red letters: **Mark Mywords has taken over! Can you save the library from its doomed fate? I think not!** A maniacal laugh comes from your computer speakers, filling you with panic and determination.

You know who the hacker is now—Mark Mywords, a notorious digital saboteur with a grudge against academic institutions. He's gone rogue, and the library's reputation is at stake!

Mission

It's your job to dive in and repair the broken citations. Each level of the library has its own set of challenges that you need to complete. Your mission is to complete the challenges in order to reach Level 7 (the final level).

Supporting Character

To assist you in your mission, you can reach out to Justin Reference, the library's resident expert on citations. Justin is a bit of a recluse, found in the deepest corners of the library surrounded by bookshelves. He's always willing to offer a hint. But don't abuse his help, he can only assist you two times per level.

Climactic Challenge

At the final level, you must confront Mark MyWords in a vast chaotic space in the library where all the references are broken and reformatted. This is where the last of his traps lie, and he's not going down without a fight.

He taunts you one last time: Can you fix it? Can you make sense of the mess I created? Let's see if you can outsmart me. . . and save this so-called "library" (insert maniacal laugh). With one final burst of determination, you dive into your final challenge, piecing together all the knowledge you've learned along the way. You're racing against the clock to bring order back to the database before Mark's hold on the library becomes permanent.

Game Play

Avatar

The game will be played in the first-person perspective via a virtual reality program. Therefore avatars will not need to be developed for this game.

Progression of Game

The player will traverse Academia Library to restore the university's research database. Players will start on the ground floor of the library and progress to the next floor of the library until they reach the top as they complete levels. On each floor, the player will look for page icons to fill their APA Guide. Each page icon will have information on the rules of APA formatting. After the player reads the rule they'll complete a puzzle that reinforces the rule they just read. If needed, the player can call on Librarian Justin Reference to provide them with a hint up to twice per level. Once a player collects all the lost APA Guide pages on that floor of the library they will need to complete a timed challenge before advancing to the next floor in the library. When the player reaches the top floor of the library they will need to defeat the hacker to win the game.

Levels

The player's level in the game is represented by what floor of the library the avatar is on. The ground floor is representative of level 1, the second floor is representative of level 2, and so on. As players progress through the library the game will also progress in difficulty. The levels the player will encounter are listed in Table 1.

Table 1

Levels of Citation Cipher

<i>Library Level</i>	<i>Topic</i>
Ground floor	In-text citations
Floor 2	Reference list formatting
Floor 3	Books, magazines, newspapers (print and electronic)
Floor 4	Websites and articles with no DOI
Floor 5	Electronic articles with a DOI
Floor 6	Other situations (e.g. government publication, work discussed in a secondary source, audiovisual work)
Floor 7	Defeat the Hacker/Comprehensive Review
Study Hall	Review of concepts already presented to the learner

Prior to attempting, or reattempting, the challenge on each level the player can go to Study Hall. Study Hall is where the player can participate in additional, untimed puzzles to increase their proficiency with the rules learned in that level. This is done to reinforce the learning concepts and encourage players to take their time instead of racing through. Completing Study Hall gives the player extra time in the timed challenge.

Icons

Hourglass Icons

Each level will have a few hourglass icons which can be collected to add extra time to that level's challenge.

Page Icons

On each level, players will learn the rules of APA citations by locating page icons throughout the library floor. When a player interacts with the page icon they will be presented with a new rule about how to cite in APA format. After collecting 2-3 pages they will be presented with a timed puzzle. The player must find all of the lost pages from each floor before they are able to attempt the level's timed challenge.

Scores

Puzzles will require a 100% pass rate to ensure the player understands the core concepts being taught.

To reinforce learning and in order for a player to advance to the next level they must earn a passing score on the level's timed challenge. The win state for each level's challenge will occur when the player achieves a score of 75% or higher. Players will fail the challenge if they score below 75%.

Because *Citation Cipher* is an educational game, scores will be maintained in the player profile and can be exported and shared with professors or instructors for proof of completion and competency.

Winning the Game

Players will successfully complete the game once they beat the 7th floor with a passing score.

Player Actions

Players will engage in various actions throughout the game. The primary movement actions will be: walking, turning, and jumping. Additionally, the player will interact with the game through interaction with non-player characters (NPCs), collecting items (such as hourglasses and pages), opening doors to access different areas of the library, and selecting the APA Guide to review pages and information already collected.

Educational Value

There have been several studies that suggest students struggle with APA in-text citations (Chism & Weerakoon, 2012; Mandernach et al., 2016). This game offers educational value in academic settings by providing students the opportunity to practice citing sources in APA 7th Edition format, allowing them to improve their skills without risk of penalties for mistakes in their written assignments. Others have attempted to create games on this topic such as "The Citation Game" and "RefQuest" from Western Sydney University (Clark & Murphy, 2020; Learning Futures and the Library at Western Sydney University, n.d.). However, this game will put a creative spin on these learning objectives and use the APA 7th edition citation format, while previous games have used APA 6th edition format.

Learning is easier when students are having fun. Video games can teach a multitude of skills including problem-solving and cognitive skills in an entertaining and enjoyable

format (Gee, 2007; Prensky, 2006). *Citation Cipher* balances learning objectives and entertainment without sacrificing gameplay which is critical to successful education games (Van Eck, 2006; Hirumi et al., 2012). The fantasy element of the narrative, featuring a rogue hacker and a library “under attack,” motivates the player and presents a challenge to overcome. Information is chunked and scaffolded throughout the game to adhere to Cognitive Load Theory, which states that learners can absorb and retain information effectively only if it is provided in a way that it does not “overload” their mental capacity (Pappas, 2024). The game gradually introduces concepts, allowing players to master basic citation rules as they advance through the levels, before tackling more complex tasks. Game design must consider the use and reuse of academic content in new circumstances to the extent that it is internalized and made more automatic (i.e. naturalized) (Gunter et al., 2008). *Citation Cipher* fosters knowledge transfer by simulating APA citation standard practices. With frequent practice and instant feedback embedded in the gameplay, it allows players to apply what they've learned directly to their academic assignments.

Player Motivation

APA format can be a difficult topic for students to learn, *Citation Cipher* gives students the ability to learn in a motivating, fun manner that reinforces long-term knowledge of the concepts. Because this game can be used as a classroom tool some players may have extrinsic motivation to participate if it is required by a course or teacher. However, intrinsic motivation is the primary factor in gameplay (Ryan et al., 2006). Therefore, Self-Determination Theory and Keller’s ARCS Model of Motivation were employed throughout the design process to drive the intrinsic motivation of players on a psychological and learning perspective, respectively.

Self-Determination Theory (SDT) postulates that intrinsic motivation arises when an experience induces feelings of autonomy, competence and relatedness (Ryan & Deci, 2000; Ryan et al., 2006). Designing with the SDT approach allows the game to target motivation through players’ emotions and psychological motives. Players have a high degree of autonomy throughout the gameplay experience. They are able to navigate each library floor at their own pace, choose to replay puzzles, visit Study Hall, or seek out hints from the librarian. To get the player to feel a sense of competence the information presented throughout the game is chunked with each page icon only providing information on one or two aspects of the APA rules. Learners are given a puzzle to reinforce the concept while it is still fresh in their minds increasing both the likelihood that they will feel confident and have success.. The learner then builds on that information in subsequent puzzles and levels of the game. For players who may struggle they have the ability to seek out help from the librarian and they can practice in an untimed Study Hall.

Although the game does not have a multiplayer mode, relatedness is developed through the narrative and incorporation of NPCs. Librarian Justin Reference serves as an ally to the player and helps increase their feelings of competence. The storyline with Mark Mywords aids players' sense of unity and a common enemy with Academia Library. This purpose allows the player to feel a sense of inclusion and in conjunction with feelings of competence and autonomy

Since *Citation Cipher*, at the core, is a game designed to teach information Keller's ARCS model was incorporated. At the onset of the game, the player is immersed in the world of Academic Library and sees the hacker's work from the first-person perspective of a student. To retain their attention and provide variety throughout the game the player must locate icons and complete smaller tasks on each floor. Because APA citations are frequently required for research in higher education there is a high degree of relevance for players, especially those in higher education and studying social sciences. The same factors that contributed to competence under SDT apply to the confidence component of ARCS. Additionally, the game also permits the learner unlimited attempts to avoid feelings of discouragement and failure if the learner has a more difficult time passing a level. Finally, to aid in player satisfaction aspects such as completing the APA Guide by finding the page icons, adding hourglass icons to increase time allotments, and allowing players to repeat puzzles and spend time in the Study Hall were incorporated.

Licensing and Copyright

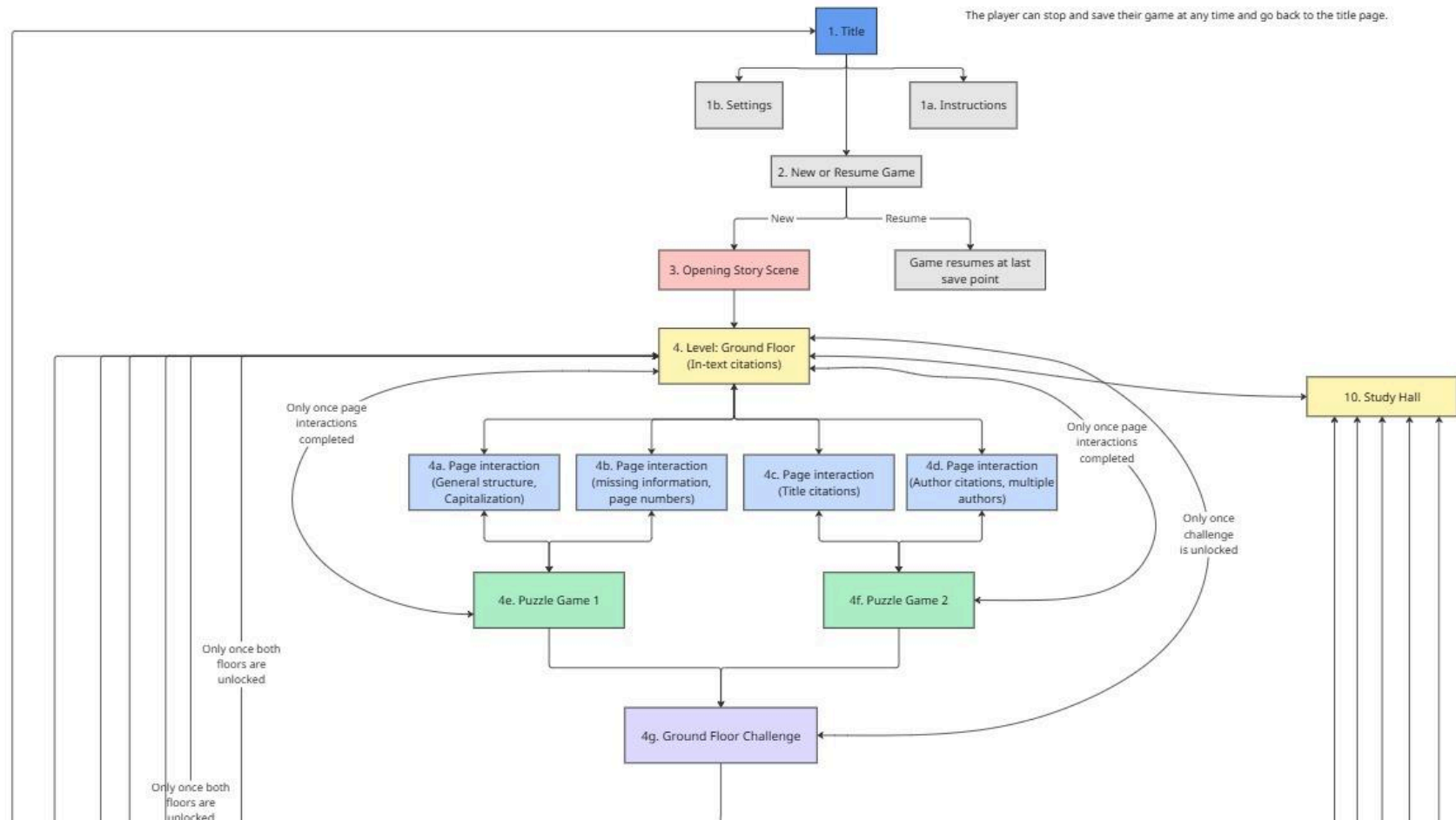
This game teaches APA Style and requires approval from the American Psychological Association. There are no other identified conflicts with licensing and copyright.

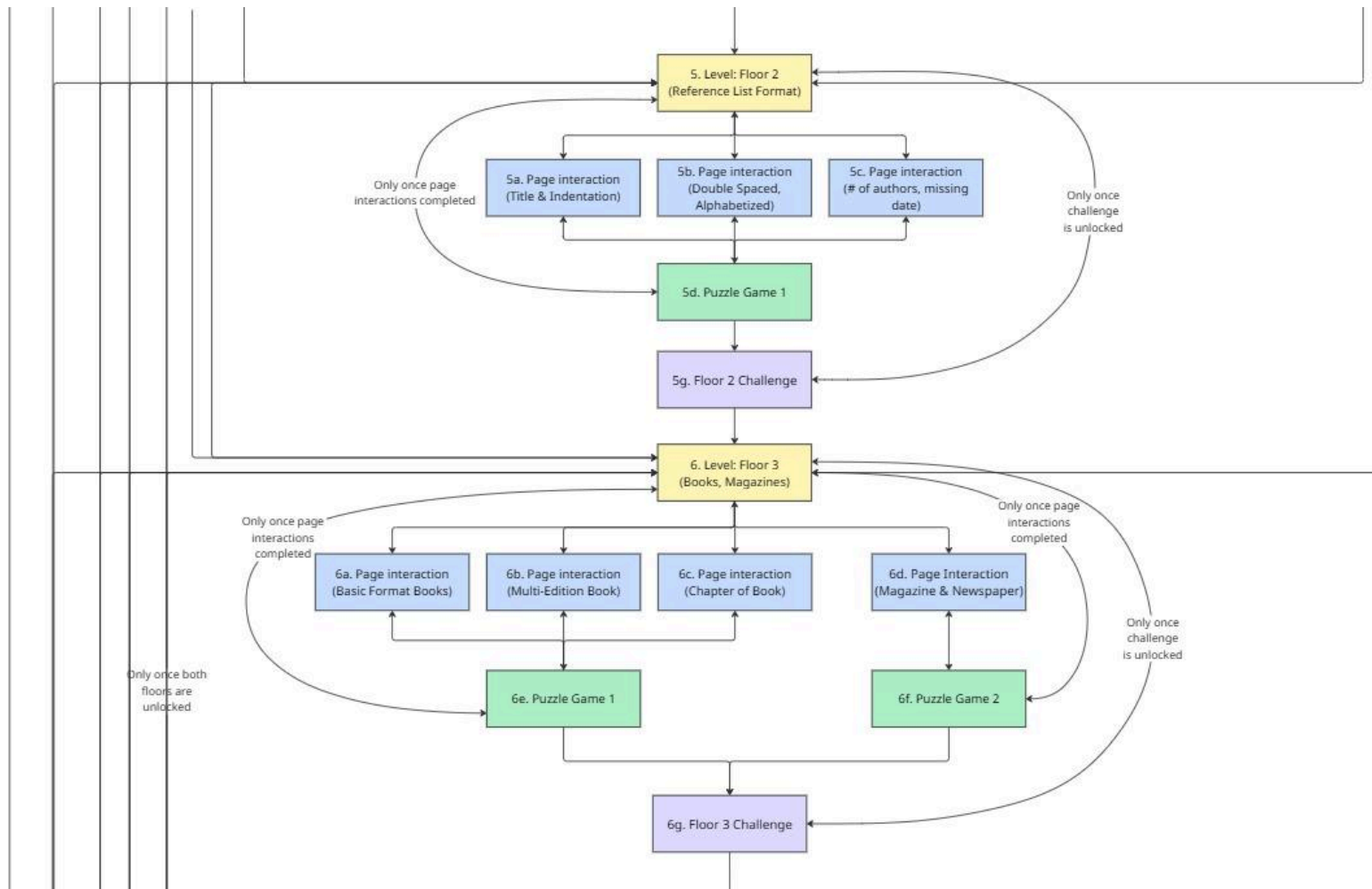
Designer Interest

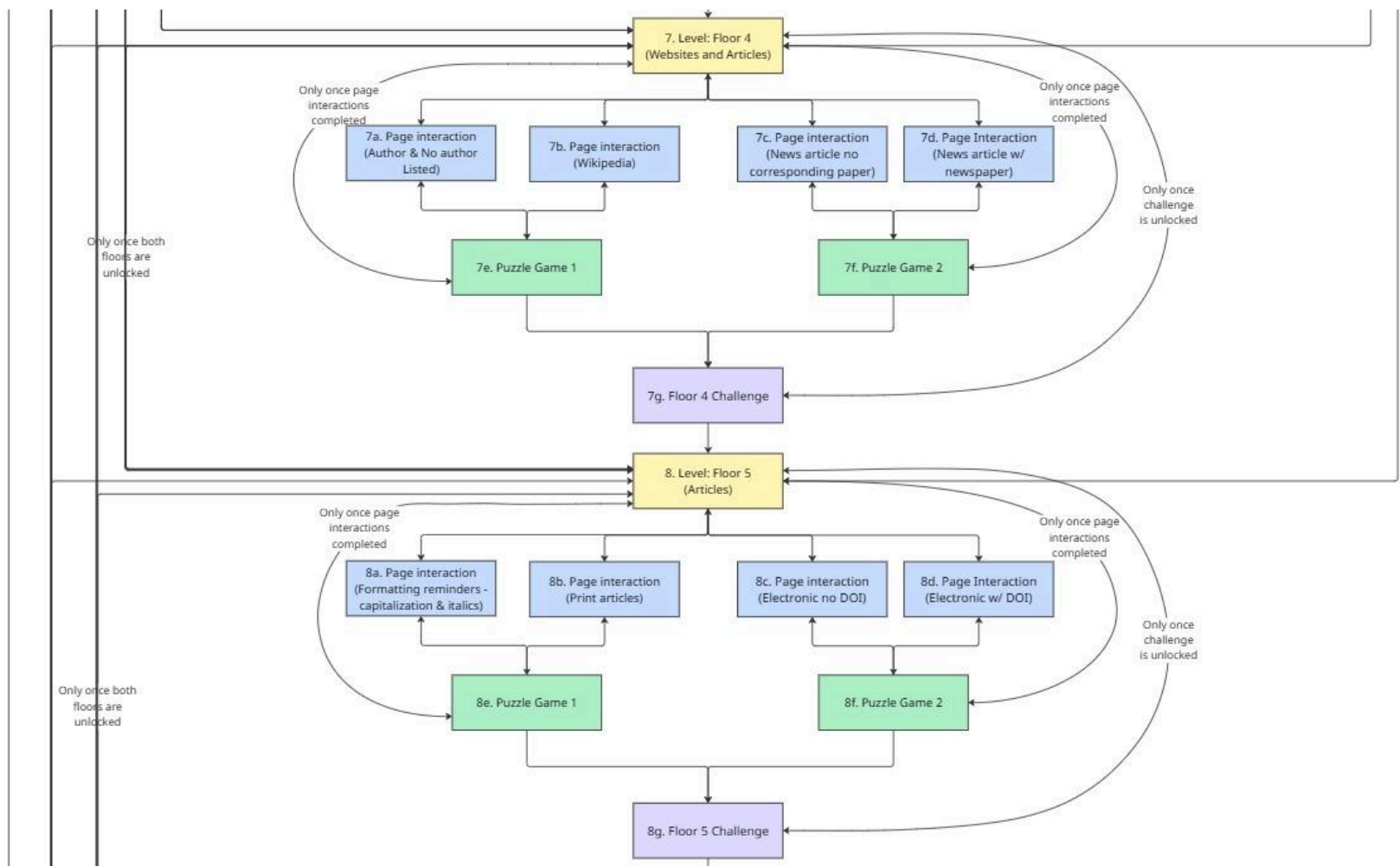
This game was of particular interest because the designers are both graduate students who have either witnessed or experienced student struggles with learning APA citation formatting. In fact, the concept for this game was borne out of a discussion about who would handle reviewing the APA citations for a group project.

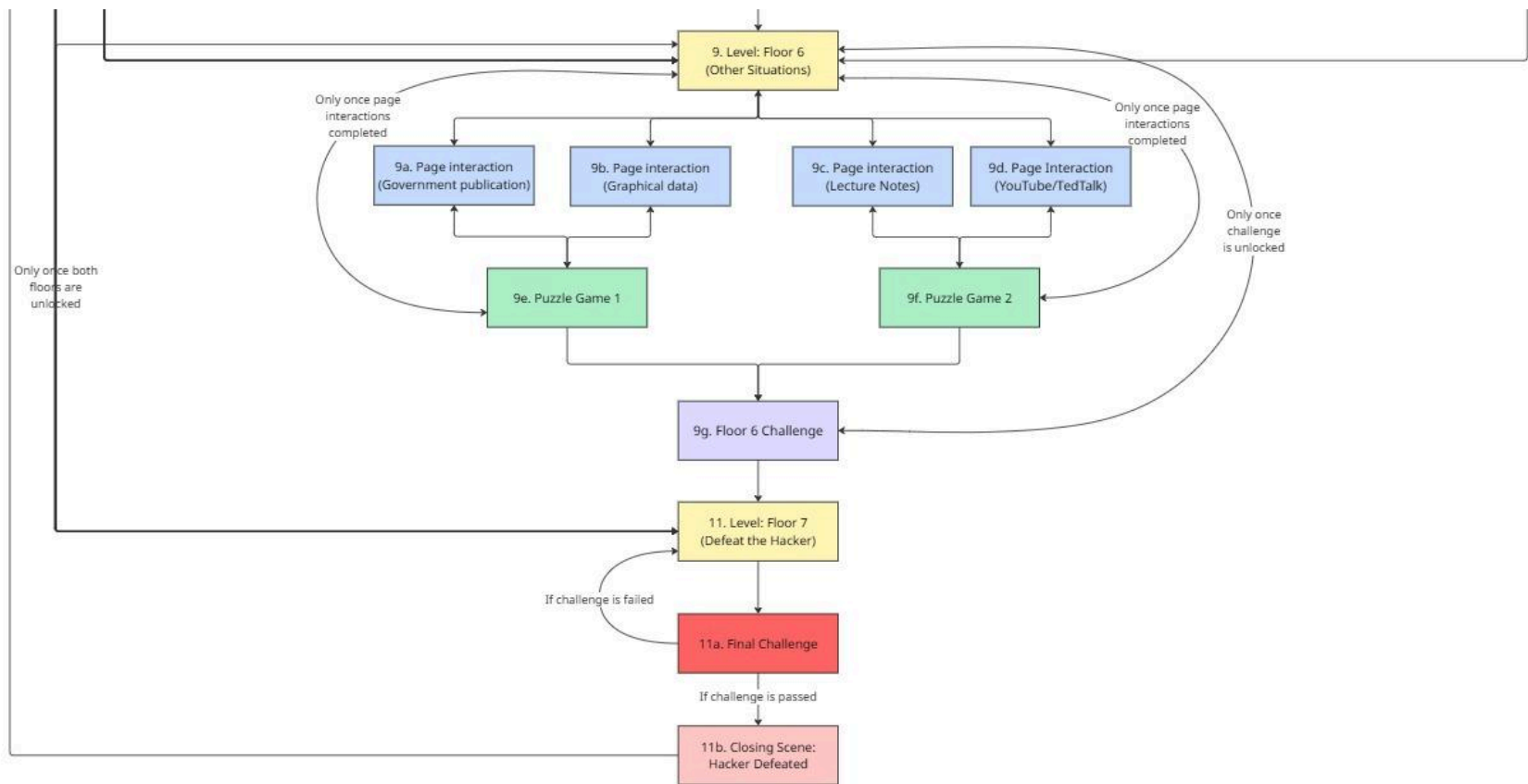
Concept Flowchart

The concept flowchart assembled below can also be located and viewed [here](#).









Storyboard

The storyboard assembled below can also be located and viewed [here](#).

CITATION CIPHER

Kat Abe & Kylie Gross



<p>Scene #: 1</p> <p>Title: Title Screen</p>	<p>Graphics</p> 	<p>Interactions</p> <p>Icons that are able to be clicked:</p> <ul style="list-style-type: none">• Start Game• Instructions• Settings (cog icon)
<p>Description</p> <p>This is the title screen of the game. Players will be able to choose to start the game, view instructions or they can edit settings using the cog icon in the lower, left corner.</p>	<p>Branching</p> <p>Instructions branches to Scene 1a (Instructions)</p> <p>"Start Game" branches to Scene 2 (Avatar Creation)</p> <p>Cog icon branches to Settings</p>	<p>Production Notes</p> <p>UX: When a player hovers over a clickable icon/text illuminate the icon/text.</p> <p>Sound Effects: an audio track playing instrumental music (piano, woodwinds) with an underlying melody that is mysterious</p>

Image background: Chat GPT Image Generator

CITation CIPHer

Kat Abe & Kylie Gross



Scene #: 1a

Title: Instructions

Description

(Page 1): Academia Library has been hacked. You must find pages to the APA Guide and complete puzzles and challenges to ascend to the top floor of the library and defeat the hacker.

(Page 2): On each floor you will find pages from your APA Guide. When you collect each page you will see an APA Style rule and complete a puzzle to help master APA citations. You must collect all pages on the floor before you can complete the challenge and go to the next floor.

(Page 3): Once you have collected all the pages on a floor you will need to complete a timed challenge with a score of 75% or better to advance to the next floor. If you don't pass on your first try, don't fret you can try the challenge as many times as you need.

(Page 4): While searching each floor of the library you can collect hourglasses. Each hourglass adds 5 seconds to the challenge for that level.

(Page 5): Need help or more practice?

- Librarian Justin Reference can help you up to 2 times per level. Click on him to get a hint.
- Your APA Guide contains all rules you've already found, refer back to it to brush up on your skills.
- Study Hall provides an untimed place to practice. Complete study hall for a 15 second bonus in the challenge.

Graphics



Branching

"X" will branch back to Scene 1

Interactions

The user can click:

- Forward arrow
- Backward arrow
- "X"

The forward and backward arrows will show the next/previous page of instructions

Production Notes

UX: When a player hovers over a clickable icon/text illuminate the icon/text.

Appearance: the background of the screen should be the inside of a regal, university-esque library. Brightly lit. An open laptop screen should be showing with the instructions on it.

Sound Effects: Same audio as title page, but the music should be much softer to not interfere with reading.

Image background: Adobe Stock; Laptop: Adobe Stock

CITation CIPHER

Kat Abe & Kylie Gross



Scene #: 2

Title: New or Resume Game

Description

Same background screen as the title screen (scene 1), but with different options.

Graphics



Interactions

Icons that are able to be clicked:

- New Game
- Resume Game

Branching

New Game branches to Scene 3

Resume Game branches to the floor where the game was last saved

Production Notes

UX: When a player hovers over a clickable icon/text illuminate the icon/text.

Sound Effects: an audio track playing instrumental music (piano, woodwinds) with an underlying melody that is mysterious

Image background: Chat GPT Image Generator

CITation CIPHer

Kat Abe & Kylie Gross



Scene #: 3a

Title: Opening Story Scene

Description

You are sitting at a desk at *Academia Library*, surrounded by other students who have their noses buried in books and laptops, working on their assignments. It is relatively quiet, with only the soft hum of whispered conversations and pages turning. Academia Library is a revered institution known for its extensive digital database – a perfect environment for research. You're just about to dive into your project when suddenly, your computer screen flickers. A 404 Error flashes across your screen, followed by another. The error messages keep coming. It's not just a malfunction, something is wrong...



Branching

If the player "resumes" the game, the opening story scene does not play when they reenter. The game resumes at last saved point.

Interactions

Skip Button: Player can choose to skip the opening story scene to get straight to the game

Production Notes

UX: Show perspective of looking out at sea of people in the library and about to get started on your work on the laptop

Text: Text can appear on the bottom narrating the scene so that player can read the text and go at their pace.

Sound Effects: The hum of voices goes quiet when the 404 message appears on screen. You can have ominous music play

Image background: Adobe Stock; Laptop: Adobe Stock

CITATION CIPHER

Kat Abe & Kylie Gross



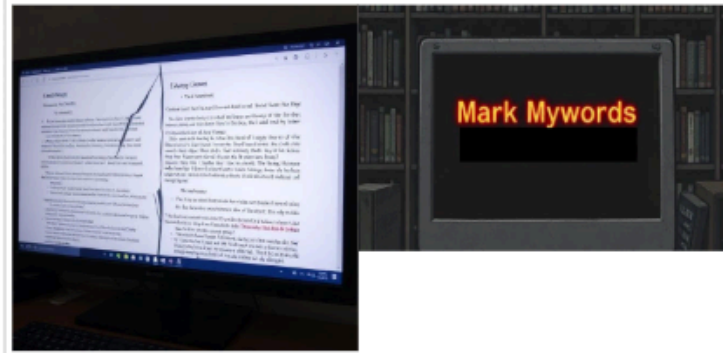
Scene #: 3b

Title: Opening Story Scene

Description

A loud beep interrupts the silence. The intercom system turns on, and the IT department says: "Security breach detected in the database. A hacker is inside. We've lost control." On the screen, you see scrambled, broken citations – APA references twisted and out of place, and footnotes missing. Before you can react, the computer screen goes black for a moment and then a message appears in bright red letters: **Mark Mywords has taken over!** Can you save the library from its doomed fate? I think not! A maniacal laugh comes from your computer speakers, filling you with panic and determination.

Graphics



Interactions

Skip Button: Player can choose to skip the opening story scene to get straight to the game

Branching

If the player "resumes" the game, the opening story scene does not play when they reenter. The game resumes at last saved point.

Scene goes to 4. Level Ground Floor

Production Notes

UX: Avatar is not in view. You are facing your screen with citations animated on the page being distorted (rewritten) and disappearing (fading out)

Sound Effects: Intercom system turns on and IT department says, "Security breach detected in the database. A hacker is inside. We've lost control." Insert maniacal laugh that fills player with panic and determination.

Image background: Adobe Stock; Computers: Adobe Stock

CITation CIPHer

Kat Abe & Kylie Gross



Scene #: 4

Title: Ground Floor

Description

Players will navigate the ground floor in search of 4 page icons and 2 hourglass icons.

The puzzles and challenge will be represented by different doors. When available the icon on the door will illuminate.

Graphics



Hourglass Icon



Page Icon



Interactions

4 page icons to collect

Once unlocked, 2 puzzle games

3 hourglass icons when collected they will add 5 seconds each to the challenge timer

1 challenge which will unlock after both puzzles are completed

Study Hall door

Branching

4 page icons - one each will branch to scene 4a, 4b, 4c, and 4d

2 puzzles once unlocked one will branch to 4e and one to 4f

1 challenge once unlocked will branch to 4g

Production Notes

UX: Players should be able to freely navigate the library - going up and down aisles of books in any direction they wish.

Pages should appear to be floating in the air and in various locations throughout each floor. Hourglasses can be placed on tables/shelves.

Sound Effects: an audio track playing instrumental music (piano, woodwinds) with an underlying melody that is mysterious

All Images: Adobe Stock

CITation CIPHer

Kat Abe & Kylie Gross



Scene #: 4a1

Title: G.F. Page Icon 1, Page 1

Description

Text for Page:

New Rule Found!

Formatting of In-Text Citations

Capitalization: Capitalize proper nouns and, in titles, any word longer than 4 letters.

When having difficult conversations with staff, it is important to maintain self-restraint (Fisher, 2025).

Format: In-text citations should be written as:

(Author, publication year)

Or, if the author is not provided

("Title," publication year)

(Fisher, 2025)

(The Junior League of Tampa, 2024)

("Art Supplies," 2024)

Graphics



Interactions

Arrow icon will go to the second page of the rule found.

Book icon in upper left corner will pull up APA Guide with all prior rules that have been found.

Branching

Do not branch from this slide. The arrow icon will be an interaction that causes the rest of the text to show.

Players should be required to select the arrow icon to advance.

Production Notes

Appearance: The background will be exactly where the player was when they interacted with the page icon. The scene will be dimmed slightly to emphasize the information on the page.

Sound Effects: Same audio will continue from scene 4.

Image background: Adobe Stock

CITation CIPHer

Kat Abe & Kylie Gross



Scene #: 4a2

Title: G.F. Page Icon 1, Page 2

Description

Text for Page:

New Rule Found!

Formatting of In-Text Citations

Location: Usually, the in-text citation should be placed at the end of the sentence prior to the punctuation.

When having difficult conversations with staff, it is important to maintain self-restraint (Fisher, 2025).

When the author (or title if no author is provided) is stated in the sentence you place the year immediately after it.

According to Fisher (2025) when having difficult conversations it is important to maintain self-restraint.

Graphics



Interactions

Arrow icon will go to the first page of the rule found.

Book icon in upper left corner will pull up APA Guide with all prior rules that have been found.

Branching

"Done" will branch back to scene 4 where the character interacted with this page icon.

Production Notes

This is the second page of the rule found.

Appearance: The background will be exactly where the player was when they interacted with the page icon. The scene will be dimmed slightly to emphasize the information on the page.

Sound Effects: Same audio will continue from scene 4.

Image background: Adobe Stock

CITation CIPHer

Kat Abe & Kylie Gross



Scene #: 4b1

Title: G.F. Page Icon 2, Page 1

Description

Text for Page:

New Rule Found!

Missing Information for In-Text Citations

Missing Author: If no author is provided, use the title of the article in quotations.

("Title," publication year)
Note the placement of the comma and the presence of quotation marks.

("Waffles," 2024)

Anonymous Author: When an author is listed as "Anonymous," use Anonymous as the author name.

(Anonymous, 2020)

No Date: When no date is provided, use "n.d."

(Jones, n.d.)

Graphics



Interactions

Arrow icon will go to the second page of the rule found.

Book icon in upper left corner will pull up APA Guide with all prior rules that have been found.

Branching

Do not branch from this slide. The arrow icon will be an interaction that causes the rest of the text to show.

Players should be required to select the arrow icon to advance.

Production Notes

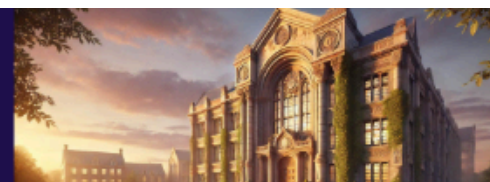
Appearance: The background will be exactly where the player was when they interacted with the page icon. The scene will be dimmed slightly to emphasize the information on the page.

Sound Effects: Same audio will continue from scene 4.

Image background: Adobe Stock

CITation CIPHER

Kat Abe & Kylie Gross



Scene #: 4c

Title: G.F. Page Icon 3

Description

Text for Page:

New Rule Found!

Titles and In-Text Citations

Capitalization: Capitalize proper nouns and any word longer than 4 letters.

Many schools require students to purchase colored pencils and sketch books ("Art Supplies," 2024).

Format: In-text citations should be written as:

("Title," publication year)

Note the placement of the comma and the presence of quotation marks.

("Art Supplies," 2024)

Graphics



Branching

"Done" will branch back to scene 4 where the character interacted with this page icon.

Interactions

Book icon in upper left corner will pull up APA Guide with all prior rules that have been found.

"Done" button will go back into the game

Production Notes

Appearance: The background will be exactly where the player was when they interacted with the page icon. The scene will be dimmed slightly to emphasize the information on the page.

Sound Effects: Same audio will continue from scene 4.

Image background: Adobe Stock

CITation CIPHER

Kat Abe & Kylie Gross



Scene #: 4d1

Title: G.F. Page Icon 4, Page 1

Description

Text for Page:

New Rule Found!

Authors and In-Text Citations

Only include the last name of the author.

Format: In-text citations should be written as:

(Author, publication year)

(Brown, 2024)

2 Authors: Include both last names separated by the "&" symbol

(Author A & Author B, publication year)

(Brown & Jones, 2010)

Graphics



Interactions

Arrow icon will go to the second page of the rule found.

Book icon in upper left corner will pull up APA Guide with all prior rules that have been found.

Branching

Do not branch from this slide. The arrow icon will be an interaction that causes the rest of the text to show.

Players should be required to select the arrow icon to advance.

Production Notes

Appearance: The background will be exactly where the player was when they interacted with the page icon. The scene will be dimmed slightly to emphasize the information on the page.

Sound Effects: Same audio will continue from scene 4.

Image background: Adobe Stock

CITATION CIPHER

Kat Abe & Kylie Gross



Scene #: 4d2

Title: G.F. Page Icon 4, Page 2

Description

Text for Page:

New Rule Found!

Authors and In-Text Citations

3 or more Authors: Include the first author's last name followed by "et al."

Note the placement of the period

(First Author Last Name et al., publication year)

(Brown et al., 2023)

Organization as the Author: When an organization is the author and it has a well-known abbreviation, write the full name in the first in-text citation. Subsequent citations can list the abbreviation. *Note: only do this if the abbreviation isn't shared with another source.*

First In-Text Citation:
(American Medical Association, 2022)

Subsequent In-Text Citations:
(AMA, 2022)

Graphics



Interactions

Arrow icon will go to the first page of the rule found.

Book icon in upper left corner will pull up APA Guide with all prior rules that have been found.

Branching

"Done" will branch back to scene 4 where the character interacted with this page icon.

Production Notes

This is the second page of the rule found.

Appearance: The background will be exactly where the player was when they interacted with the page icon. The scene will be dimmed slightly to emphasize the information on the page.

Sound Effects: Same audio will continue from scene 4.

Image background: Adobe Stock

CITation CIPHer

Kat Abe & Kylie Gross



Scene #: 4e

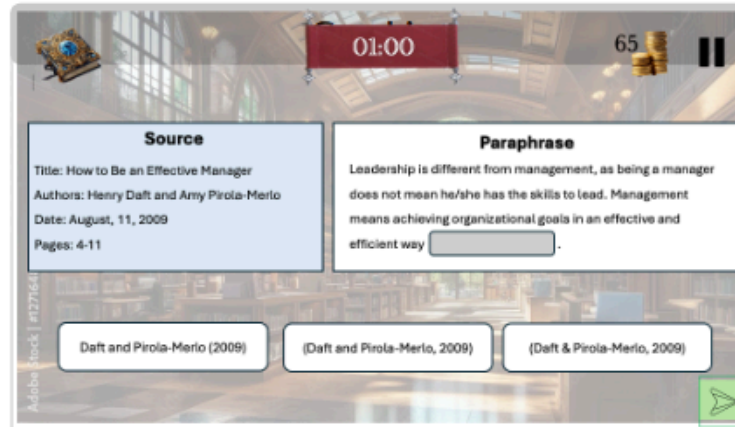
Title: Puzzle Game #1

Description

Pattern Recognition. This game based on [in-text citations basic rules](#):

This is a timed game, where different sources appear (journal articles, book titles, electronic sources, etc.) and player must select the correct citation source based on whether it is a paraphrase or a quote.

Correct = 5 coins
Incorrect = no coins
There is no re-do, it takes you to the next source.



Branching

Page Icon - 4a, 4b, 4c, 4d (Depending on which ones they've collected)

Pause Button -> Exit Game - Takes you back to 4. Ground Floor

Score Screen - At End of Puzzle

Interactions

Page Icon: You can click on page icon to open pages on in-text citations. *Clicking on page icon pauses the timer.*

Submit Button: submits in-text citation

Pause Button: Pause icon prompts you to a pause screen where you can turn off music or sound effects, or exit game.

Timer Icon: Click on Timer to add more time. 50 coins = 30 seconds added.

Production Notes

Game is timed for 30 seconds to test the player's skill. Choices alternate spaces if the game is replayed.

Font: Regal or Medieval Looking Font, i.e. Baskerville

Sound Effects: A soothing library track such as this one: <https://www.youtube.com/watch?v=Aw0BfB4EMY8> The music should be low to not distract the player from focus or concentration.

Image background: Adobe Stock; Book: Adobe Stock; Tokens: Adobe Stock

CITation CIPHer

Kat Abe & Kylie Gross



Scene #: 4f

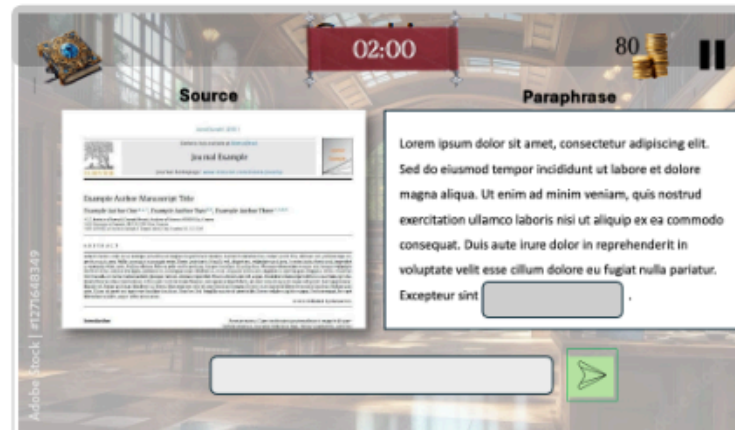
Title: Puzzle Game #2

Description

This is a timed game, where different sources appear (journal articles, book titles, electronic sources, etc.) and player must type the correct in-text citation based on the source.

In-Text Citations:
100% accuracy = 10 coins
1 Mistake = Partial Credit 5 coins
2 Mistakes or More = No coins

There is no re-do, it takes you to the next source.



Branching

Page Icon - 4a, 4b, 4c, 4d (Depending on which ones they've collected)

Pause Button -> Exit Game - Takes you back to 4. Ground Floor

Score Screen - At End of Puzzle

Interactions

Page Icon: You can click on page icon to open pages on in-text citations. *Clicking on page icon pauses the timer.*

Submit Button: submits in-text citation

Pause Button: Pause icon prompts you to a pause screen where you can turn off music or sound effects, or exit game.

Timer Icon: Click on Timer to add more time. 50 coins = 30 seconds added.

Production Notes

Game is timed for 30 seconds to test the player's skill. Choices alternate spaces if the game is replayed.

Font: Regal or Medieval Looking Font, i.e. Baskerville

Sound Effects: A soothing library track such as this one: <https://www.youtube.com/watch?v=Aw0BfB4EMY8> The music should be low to not distract the player from focus or concentration.

Image background: Adobe Stock; Book: Adobe Stock; Tokens: Adobe Stock

CITation CIPHer

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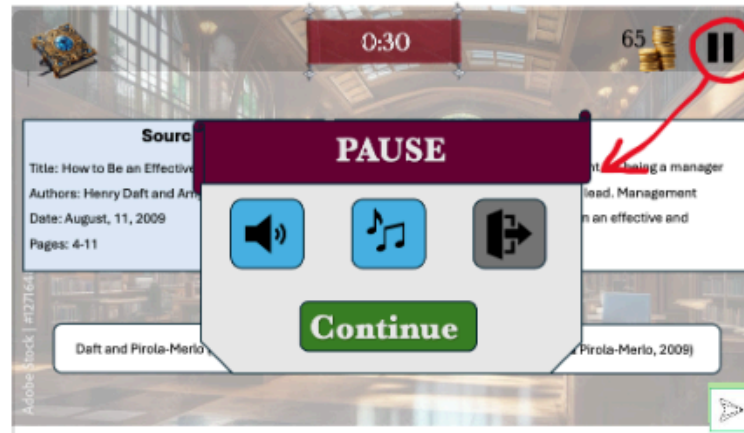


Scene #: 4f / 4e

Title: Pause Button Page

Description

This pop-up screen appears when the pause button is clicked in the middle of a puzzle game.



Branching

Exit Button - Takes you back to Level Floor

Production Notes

Color Palette: Deep Burgundy for Pause Banner

Sound Effects and Music Button: When a button is clicked, meaning the music or sound is deactivated, then the button should turn gray as its background and a slash should go through it to indicate it is turned off.



Interactions

Sound Effects Button: Turns on/off sound effects

Music Button: Turns on/off the music

Leave Button: Leave the game, save progress, and go to ground floor.

Continue Button: Continue to game

Image background: Adobe Stock; Book: Adobe Stock; Tokens: Adobe Stock

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Scene #: 5g

Title: G.F. Challenge: Hacker's False Leads

Description

Script: In this challenge, the hacker might try to mislead you with **false leads** or "fake" citations that look legitimate but are fabricated. You must cross-check these sources carefully using clues from the sources to avoid falling into the hacker's trap.



Branching

Branches to Feedback Pages on the following slides

Interactions

Click Arrows in Citation Database to view the correct citation options.

Scroll up or down to view the source and in-text citation in the paper.

Check Button: The current in-text citation is correct.

X Button: In-Text Citation is a "fake" and you replaced it with the current citation from database on screen

Production Notes

Note: You cannot access the page icons on this challenge.

Image background: Adobe Stock; Hourglass: Adobe Stock; Tokens: Adobe Stock

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Scene #: 5g

Title: Feedback Page: Solved Challenge!

Description

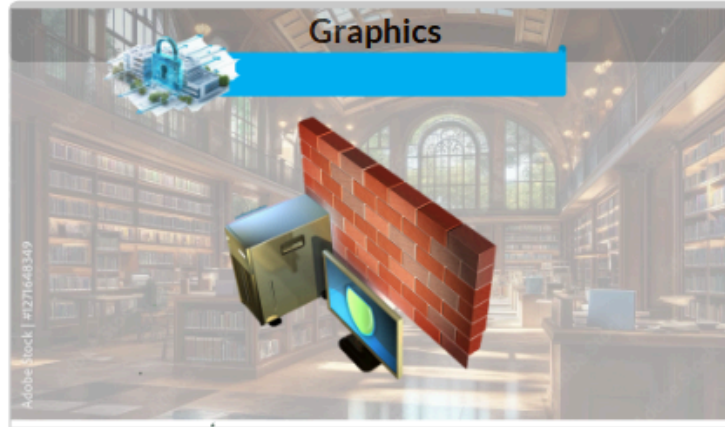
This notification page has to keep the player motivated, focusing on the progress they've made while pushing them to continue efforts of their mission.

Narration:

You've solved the challenge and successfully restored the library's firewall on this floor. The hacker's access is now more restricted, but don't let your guard down. He's still out there wreaking havoc on other floors. The next floor is unlocked!

Stay sharp, expert! You're one step closer to protecting Academia!

Graphics



Interactions

N/A

Branching

New floor is unlocked! Door to new floor is shown as accessible.

Production Notes

UX: You can have a firewall animate to completion (brick by brick) to show fortifying the defenses.

Images: Adobe Stock

Prototype

The prototype for this game was developed in CenarioVR and Articulate Storyline. The game created in Storyline was embedded into a hotspot within CenarioVR. Due to restrictions on publishing associated with the CenarioVR subscription held the game was not able to be made public on a platform such as Meta.

However, the game can be viewed via CenarioVR on any computer or for users with access to their platform.

Prototype Link

The prototype can be viewed through CenarioVR at:

<https://cenariovr.com/app/#/view/private/13dl?zfile=live.zip&id=51033>

Image Transparency

The images used in the prototype were garnered from a number of sources, including ChatGPT, Adobe Stock Photos, and through personal development. All images used did not require attribution of the original source. However, to ensure transparency Table 2 contains a list of all graphics and where they were sourced. Any graphics not listed were solely developed by the creators of this project.

Table 1

Prototype Graphic Attributions

<i>Graphic</i>	<i>Source</i>
Citation Cipher title page image	(OpenAI, 2025)
Librarian Help Icon	CenarioVR built-in icon
Page Icons	CenarioVR built-in icon
Hourglass Icons	Adobe Stock Photos
Puzzle Icons	CenarioVR built-in icon
Library Room 1 360° image	Adobe Stock Photos

Library Room 2 360° image	CenarioVR AI Generator
Study Hall 360° image	CenarioVR AI Generator
Book icons in Study Hall	Adobe Stock Photos
Justin Reference 360° image	CenarioVR AI Generator
Puzzle game background image	Adobe Stock Photos

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