MMMad Libs: Final Project Report
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What is MMMad Libs?

MMMad Libs is a multimedia, interactive version of Mad Libs, where users can type in words, sketch drawings, using wall display and pen, and search for images via Google Image Search. The user input is assembled into a pre-written story, and then the story is presented to users as a finished slideshow or "movie."

Where We Started

MMMad Libs began its life as "IdeaCollage." We brainstormed different ways to link captured photos, sketches, words, and sounds. We saw IdeaCollage as a "walk-up" exhibit in a museum such as SFMOMA, where small groups of strangers would work together to produce interactive, real-time collaborative art. Museum visitors would work together to create an art artifact, leading to a collage-like juxtaposition ideas. The product of their collaboration would be a mind-map-esque, navigable space like a gallery of the ideas.

We then envisioned our product as a collaborative tool in the corporate world, to be used by multidisciplinary teams. In a product design or software development environment, IdeaCollage would be used to create an artifact out of a brainstorming session – an artifact that could be displayed, annotated, published, and expanded later.

We came to believe, however, that a novice artist would be unable to create a satisfying work of art in the short period of time described in the assignment guidelines. We also realized that we needed more structure in the resulting output of our product. Via a Mad Libs-style interaction, we were able to keep the elements of group improvisation and collective creativity intact, but add collaborative and structured storytelling to form a more cohesive and unified form of art. We were particularly inspired in this arena by "the sentence game" and "one word at a time" storytelling.

User Testing

We created a prototype where users were instructed fill in a series of Mad Lib blanks. Users could type in a word, sketch a drawing, or choose an image. Then they were presented the final story with the blanks filled in with all of the input they had completed.

Users were instructed to complete a background questionnaire on computer user and game playing habits. The sessions were videotaped and consisted of participants in groups of 2 to 6. They used the prototype with minimal guidance/interference form us, and were encouraged to talk aloud about actions, thoughts, feelings, reactions, and ask questions. Afterwards, we asked them to share overall impressions and opinions of the application.

User Test I

For our first test, we asked "How will people work together to fill out a Mad Lib?"
We wanted to know how much they would collaborate, how long it would take to finish a complete story, would users be spontaneous, and most importantly, would they have fun? At this point in development, the prototype forced users to fill in a word, sketch, or image for each blank, chosen randomly.

After watching a group of two people use our prototype, we realized they were confused by certain labels and interface elements, and misunderstanding instructions due to unclear wording. We observed them splitting tasks; one person consistently typed while the other consistently used the touchscreen pen to navigate and draw. The reactions to the prototype were boredom while filling in blanks and disappointment in the final story product.

We realized that users wanted a clearer understanding of what their eventual goal was and an indication of progress towards that goal, as well as a more appealing final story.

User Test II

For our second test, we tested possible story layouts and interactions using paper prototypes. We were interested in the way the final story should be presented. Should it be an interactive experience or more like watching a movie? Should we add a human narrator, a computer (text-to-speech) narrator, or no narrator at all? As for the visual layout of story with all of the blanks filled in, we wondered: how much text to show at once, who controls pace of the reading (the user or ourselves as application designers), when is a blank filled in with its picture/word as the story unfolds, and whether or not we needed captions for visual elements for when a blank had a sketch or image, but no word. At this point in development, the prototype forced users to fill in either a word, sketch, or image for each blank.

Users responded very well to the paper prototypes, and much preferred hearing a human voice over computerized text-to-speech voice or no narration at all. They also preferred having the story read to them, one sentence at a time, and similarly preferred that a Mad Libs blank was filled in as the narration reaches that point in the story, creating anticipation.

User Test III

For our next iteration of the prototype, we changed the input method so that users could fill in a word, sketch, or image for each blank, or any combination of the three. We also created a "story map" that allowed users to see the context of the blanks in the story and fill out the blanks in any order they wished in a non-linear, non-tunneled fashion.

We were interested in whether users understood the concept of the "story map," if they understood they could fill in any combination of a word, sketch, or image for each blank, and whether they had more enjoyment in *process* or the *product* in using our prototype. We also observed group dynamics between the users, and the trade-off between boredom in filling out the story versus eventual payoff of seeing the final result.

Surprisingly, users clearly disliked the story map. They consistently filled out the story blanks in a linear fashion anyway, and did not want to see a bigger context for each blank. Users still desired better directions and clearer labeling, but also expressed a strong desire to erase mistakes while sketching (mostly due to hardware issues rather than poor skill). Also, some groups did not understand that they could fill in a word, sketch, or image for each blank, or any combination of the three, and were disappointed with the final output especially if they had only entered in words.

Once again, the groups showed a disappointment in final output saying "it looks like Notepad with images." We alleviated some of the disappointment by adding "Wizard of Oz" style narration to test whether a human voice guiding the process would improve overall satisfaction. Based on the results of this test, we realized the importance of keeping the

group together via narration as they read the final story together, creating a better communal watching experience.

User Test IV

Our next iteration added a progress bar so users would know how far along they were in filling out blanks. We added clearer labels, buttons, and directions, as well as encouraging users to fill in a word and a visual element for each blank, creating consistency. We also made the decision to animate the final story using Flash; we hoped important mood elements such as audio narration, a background soundtrack, and consistent visual design would unify the watching experience.

We hoped to test our new erase function, shown as an "undo" button on the sketching canvas. We also wanted to test subjective satisfaction with the prototype and the reaction to the more aesthetically pleasing final story.

During this round of testing, we found much higher user satisfaction and a greater willingness to be creative. Users spent time discussing and collaborating on word choices and sketches. There was a higher enjoyment during both the process and product of filling out a MMMad Lib. Users expressed satisfaction in drawing and searching for images, and had fun watching their final story. In fact, users often were laughing too hard to pay attention to final movie.

Based upon this input, we polished the delivery of the final story by adding pauses to anticipate punch lines and to account for audience laughter. Our main focus was making the final story feel like a complete product. We also added an introduction sequence containing directions, to warm our users up and predispose them to having a good time.

What We Learned

The choice of the phrase "Mad Libs" constrained us from pushing the boundaries of the "Mad Lib" paradigm too far. This impacted not only the preconceptions of users, but our thinking about the project as to what was appropriate and what would be pleasing both in the input and output phase.

We also realized that sometimes our design hypotheses were wrong and too radical. The prototype began using a series of linear blanks as the input method, switched to a Story Map, and then switched back to a linearity method, as users found the Story Map awkward and unnecessary.

We grappled intensely with the challenge of effective comedy and realized that we needed to very carefully consider and understand the elements of comedic timing, warming up the audience, building anticipation, and creating an appropriate atmosphere for users to enjoy themselves. Making the end result enjoyable paid off, as we paid more attention to attractive visual design, background music, and narration in the later prototypes, resulting in bigger user laughs and enthusiastic requests to play again.

In refining our prototypes, we tried to create a balance between the short-term burden of filling in blanks ("How many more are there?") and the long-term reward of creating a pleasing slideshow ("Can we do it again?"). We confirmed without any doubt what might already have been obvious: users to want the maximum gain from a minimum of effort.

Addressing smaller scale usability issues seemed to have a disproportionately large effect on perception of the prototype. By minimizing scrolling and allowing erasing, users had less trouble navigating and using the prototype. Also, by switching from a "text, sketch, or image" to a "text field and choice of sketch or image" paradigm, we were able to encourage users to be more creative and thus create a more pleasing final product.
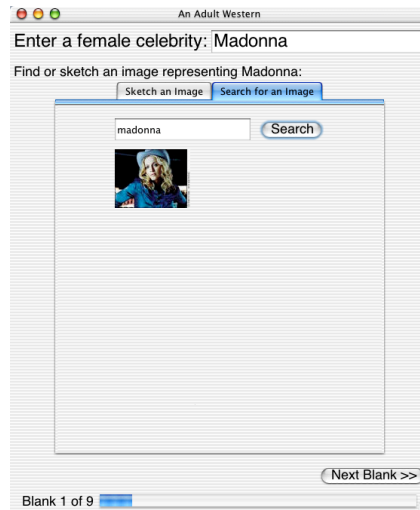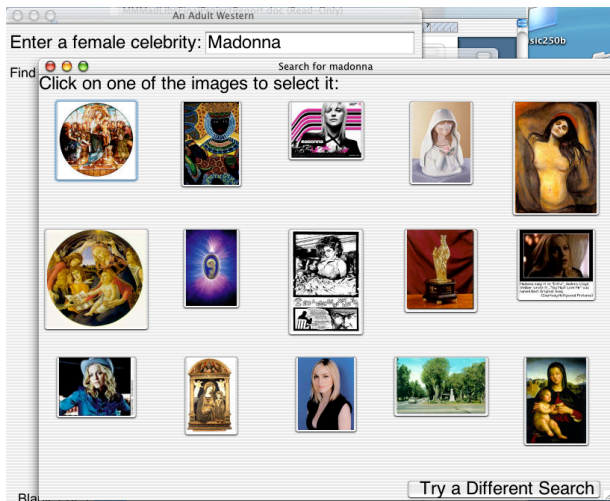
Where We Finished

We also realized the importance of having a loose definition of art, as the experience of completing a MMMad Lib is just as important as the final product. This translated well in the final class demo session too, as many participants' first response was to ask to try one of the other libs (which, alas, hadn't yet been implemented). Through our process, tested with users and observed them using MMMad Libs. And in the end, by listening to the input we gained from user testing and pushing the boundaries of what can be considered a Mad Lib, we were able to create a pleasing and fun experience for our users.

Sketching
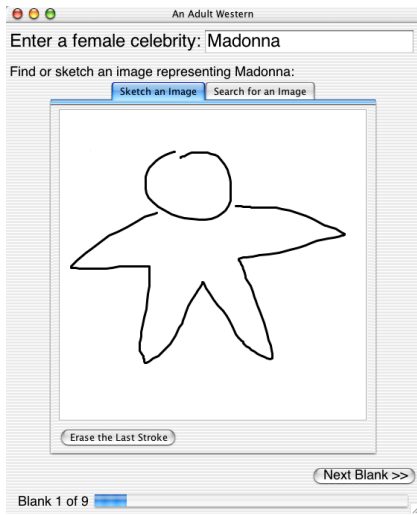
Google Image Search (Searching)

Final Outputted Story