

# Perspective

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## Problem and Solution Overview

We hope to address what we see as as a major problem in education: the study of history and culture lacks engagement and global perspective. Students typically learn history from the point of view of a single textbook or worldview. Furthermore, they learn a series of facts that are difficult to connect with and process deeply, and therefore are not memorable. In order to address these issues, we propose a system of sharing first-hand accounts, where people from all over the world will record their experiences of particular time periods or events in history. We hope that elders in particular will share their significant life experiences. With an artifact of first-hand narratives, it will be possible to facilitate a host of ways to engage students and improve contextual and cross-cultural understanding. One mode of engagement we propose is a United Nations-style debate of history and culture, where each debater watches narratives from and then represents a geographic or cultural group of people. Our proposed solution provides secondary benefits to students by improving their ability to understand complex narratives, and secondary benefits to elders by generating excitement about technology and increasing feelings of connectedness and purpose. Our solution also has the potential to improve cross-generational understanding.

*Note: At the time of conducting contextual inquiry, our problem solution was slightly different and our solution did not yet include a debate of history and culture.*

## Contextual Inquiry Customers

We conducted interviews using contextual inquiry with members from our three groups of customers: students, educators, and elders / storytellers.

**Student Xiao** is a Chinese liberal arts student in the equivalent of her junior year of high school. She will take the NCEE examination next year, so she needs to practice reading comprehension in order to receive a high mark. We observed Xiao over video chat as she answered reading comprehension questions on a practice exam, and asked her to think aloud.

**Student Alicia** is 14 years old and recently completed 8th grade. Her favorite subject is English, but she also really enjoys history. However, she now despises math after having a bad instructor.

**Student Melanie** is 13 years old and recently completed 7th grade. Her favorite subject in school is English, and her least favorite subject is history.

We video chatted with sisters Alicia and Melanie with both of them in Alicia's room. We asked them to walk us through writing an essay and how they researched for writing papers. We also asked about what teaching styles they preferred and what they found boring.

**Educator Jill** is a ninth grade history and English teacher at Lake Washington High School, and mother of two children.

Since it is summer and school is not in session, we could not observe Jill in the process of making lesson plans or teaching a class. Instead, we met at a cafe where we asked Jill to walk us through her process. She also talked a lot about how her teaching has changed in the past few years because of technology integration from teaching to learning to grading.

**Educator Natalia** is a design professor at Cornish College of the Arts in Seattle, where she teaches Design for Social Change, Design History, and Senior Studios. She is also a design critic, author of several books and articles about design, and co-director of a nonprofit for refugee relief.

Again, since school is not in session, we talked to Natalia over the phone. She was able to walk us through her process for coming up with a curriculum, test questions, and method of teaching. She also gave great insight to how she as an educator could potentially use this program in her classes.

**Elder / Storyteller Fran** is a senior and former educator living in a retirement community in Seattle. She grew up in Washington state and has vivid memories from World War II. The interview was conducted in a common area of the retirement community, and our role was simultaneously "apprentice" and "audience."

**Elder / Storyteller Muy-Choung** is a Chinese immigrant living in US. She was born and raised in Cambodia, then escaped the Khmer Rouge Regime by moving to America at the age of 27. Muy is the mother of four children born and raised in the US.

We conducted the interview in Muy's living room where we asked her to tell us a story from her childhood. First to her daughter, next being filmed with her daughter present in the room, but not facing her. And last with her alone in a room talking to the camera.

## Contextual Inquiry Results

When we asked our two "elders," Fran and Muy, to share first-hand accounts with us, we discovered that performing this task in the context of an interview is unnatural. The range of possible stories made it difficult for them to select a single story. As Muy stated, "There's an endless amount of stories...I just don't know where to start." Fran and Muy only began their stories when provided with a prompt (topic). Muy had some additional apprehensions about telling a story that would be recorded, but she was happy to do it once she knew that the purpose of the recording would be to educate children. Fran and Muy were both supportive of sharing their stories for the purpose of education.

Fran and Muy decided to tell stories of a different nature and purpose. Muy talked about her childhood with the main purpose of teaching her cultural values, which she feels young people lack. Fran, on the other hand, talked about her experience of a time in history (World War II), and what life was like for her during that time. Fran made interesting observations about storytelling in a retirement home (where she lives). A group of the residents frequently share their stories over coffee in the morning. Fran has noticed that at this gathering, the residents try to “one up” each other with successively more impressive stories. She feels that a major motivation for elders to tell stories is to provide some justification of their (past) importance and worth.

The educators talked through the way they typically plan their lessons, and shared insights on how our proposed solution might be useful to them. The typical process for planning a lesson proceeds as follows. The instructor thinks of a topic for the unit based on what the students know or can do, looks for resources (at an online teachers’ forum), and then adapts those resources to involve questions about what has been discussed in class. A major concern when planning a lesson is that it must conform to a state-accredited curriculum. The educators we interviewed stressed that an interactive style of teaching (rather than lecture only) is more engaging and successful. The educators were most excited about having their students use first-hand narratives as sources in reports.

While we have since modified the primary tasks to be performed by students in our concept, we used the contextual inquiry interviews to observe students performing reading comprehension tasks. The preferred method for answering reading comprehension questions was to read the entire passage, then refer back to specific portions of the passage when answering individual questions. In general, the students we interviewed were under the impression that they perform more poorly on reading comprehension tasks -- or on writing papers -- when they do not find the material interesting. The details of how students perform reading comprehension tasks is only tangentially related to our concept as it currently stands. For one, reading comprehension is not necessarily correlated with comprehension of aural or visual narratives. In addition, we envision richer student interactions such as debate with the first-hand accounts collected by our system.

## **Analysis of New And Existing Tasks**

We envision the following people using our system: elders / storytellers, educators, students, and more generally anyone interested in culture / history. Each of these groups currently performs tasks related to our system. Our system would bring these tasks together and enrich them. Elders (and others) tell stories about their life experiences. These stories typically are not recorded or communicated more broadly. Educators assign reading materials and questions to their students. At present, they take the materials from existing sources and then either make up questions or find them somewhere (e.g., on the web). Students learn about culture and history from textbooks, which typically present a single point of view. If they practice reading comprehension, they do so from testing materials.

We tried to get a feel for how much these groups would like to perform the tasks we envision. Elders would not mind sharing their stories publicly. Whether or not they desire to share most

likely depends on how useful they view our system. As we stated earlier, elder / storyteller Muy was unwilling to record herself and worried about who would view her video until we told her that it would be used to educate children. Students Melanie and Alicia (who are in middle school) were not interested in being tested on reading comprehension, but were interested in using first hand accounts as sources for school reports. Educators Jill and Natalia, who teach history and English, supported the view that using the accounts as sources for reports rather than stories for comprehension would be most useful when teaching their classes.

We will describe three tasks -- one each of simple, moderate, and complex difficulty -- in more detail.

**Task 1: Elder wants to record a story that he is telling.** (Difficulty: moderate; frequency: low; importance: medium)

*How is the task learned?*

Storytelling by elders is learned over the course of a lifetime of experience and sharing.

*Where is the task performed?*

Storytelling is typically performed in either a community setting (e.g., in a retirement home), or in a family setting. Example scenario: An elder brings his new iPad to morning coffee at the retirement home, where seniors frequently share their stories with one another. He wants to record the story he will tell, and the stories of other seniors if they will let him.

*What's the relationship between customer & data?*

The storyteller synthesizes observations and data from the past in order to tell a coherent story. If there are listeners, they may interrupt or ask questions. The storyteller creates data himself, in the form of the coherent story.

*What other tools does the customer have?*

Elders could use basic recording technologies to record their stories. However, this is rarely done in practice. More commonly, stories are relayed by word of mouth, in an aural tradition. Details and emotions are inevitably lost when first-hand accounts are not recorded.

*How do users communicate with each other?*

When someone tells a story, the audience typically just listens, but may interrupt. Good storytellers use subtle cues from the audience, such as facial expressions, to determine the pacing of the story and to captivate the audience.

*How often is the task performed?*

Storytelling is performed frequently, especially in retirement communities. We noted above that the frequency is low due to the projected frequency of storytelling, compared to story consumption in our application.

*What are the time constraints on the task?*

The main time constraint on storytelling depends on the interest level of the audience, or possibly the amount of time available for telling a story. This latter constraint is not a large problem for retired people, who likely have time to spare.

*What happens when things go wrong?*

Much can go wrong when telling a story, primarily on the part of the storyteller. Telling a meaningful and engaging story is a difficult task. In real life, storytellers may recover from

failures in a number of ways, depending on the setting. A storyteller may choose to recover from failures in real time, or may ask to be allowed to return to an earlier point in the story.

**Task 2: Student searches for and views perspectives on a given topic.** (Difficulty: easy; frequency: high; importance: high)

*How is the task learned?*

At present, students typically learn about a given topic from the single perspective presented by a textbook. They may hear first-hand perspectives from family or friends, but this is not as common. A student may also learn about various perspective during travel or from search on the internet.

*Where is the task performed?*

Students typically learn a perspective about a topic either at home or in the classroom. They may hear first-hand perspectives at other times, such as during meals or visits to relatives.

*What's the relationship between customer & data?*

Students are consumers of perspectives on topics in history and culture (the data). This data is commonly presented to students in a non-interactive way (i.e., lecture style), but if a student is talking to an actual person, he may have the opportunity to ask questions and interact with the data.

*What other tools does the customer have?*

Students do not have many options to gain perspective, outside of textbooks, contacts, the internet, and traveling.

*How do users communicate with each other?*

As stated, this task is often presented lecture-style, in which interaction is not possible. When a student has the opportunity to interact with an individual with a first-hand account to share, he may interact through dialogue.

*How often is the task performed?*

Students are frequent consumers of information. In history classes, they are presented with a view on history and culture. At present, students may be exposed to first-hand accounts, but our impression is that this does not occur frequently. We hope that this exposure will become frequent through use of our application.

*What are the time constraints on the task?*

Listening to first-hand accounts is subject to the same time constraints as telling stories, depending on context and interest levels. In our application, students could potentially take as much time as they like to peruse perspectives.

*What happens when things go wrong?*

In our system, students must be able to find perspectives on issues in order to accomplish more complex tasks and gain understanding. If a student is unable to gain this understanding, he may have difficulty participating in more complex learning tasks with other users, such as debate.

**Task 3: After viewing perspectives on a topic from the point of view of a specific geographic or culture group, a student debates with other students who have viewed perspectives on the same topic from different points of view.** (Difficulty: complex;

frequency: medium; importance: high)

*How is the task learned?*

Debate is a skill that one learns as part of everyday life. However, debating through role play is a skill that is rarely practiced, unless students participate in activities such as Model United Nations.

*Where is the task performed?*

This task is rarely performed, except at organized sessions of Model United Nations, or debate clubs.

*What's the relationship between customer & data?*

When students perform this type of debate, she must synthesize a variety of information about the group of people she is representing. The student must engage in complex arguments with other students who represent different groups of people, and respond to points made by other students.

*What other tools does the customer have?*

Students who participate in this type of debate typically learn about the groups they represent through research or facts that are provided by organizers of the debate.

*How do users communicate with each other?*

Debaters communicate with each other through discourse. There is an exchange of ideas, with an objective of convincing other debaters.

*How often is the task performed?*

This task (role-play debate, not debate in general) is rarely performed, except in specialized groups and settings.

*What are the time constraints on the task?*

Time constraints are often placed artificially on debaters, in order to ensure that there is a conclusion to the debate. Often, debates take place in a single session.

*What happens when things go wrong?*

When things go wrong for a debater during a debate, the debater will be less effective at presenting her views and perspectives. In a competitive debate environment, this could cause the debater to lose the debate. In the context of our application, an inability to effectively convey the most salient arguments on behalf of a group of people could mean that other participants in the debate will not fully understand that group of people. The overall quality of a debate is degraded when debaters are unable to synthesize information and present the strongest arguments.

## **Sketches of important screens**



RECORD A NARRATIVE!

AUDIO ONLY
 VIDEO
 TEXT ONLY

★ NEED A PROMPT?

UPLOAD FILE

TELL ME ABOUT...

CHILDHOOD HISTORY	LIFE EXPERIENCE
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

PROMPT  
OR  
Record in  
Natural  
Environment

00:00

00:02:08

00:02:08

DONE EDITING

1 2 3 4 5

- EDIT -
- RERECORD
- SUBMIT →

navigation

BACKGROUND

RATINGS

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Rate this video

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USEFUL

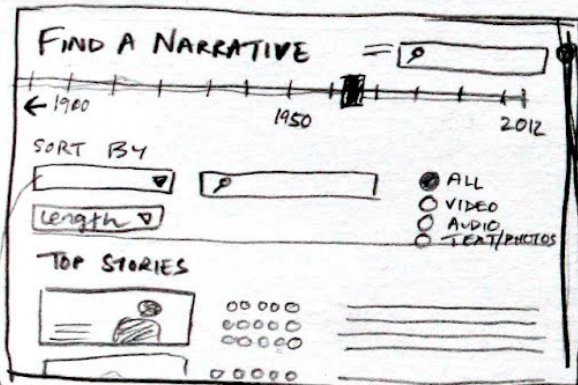
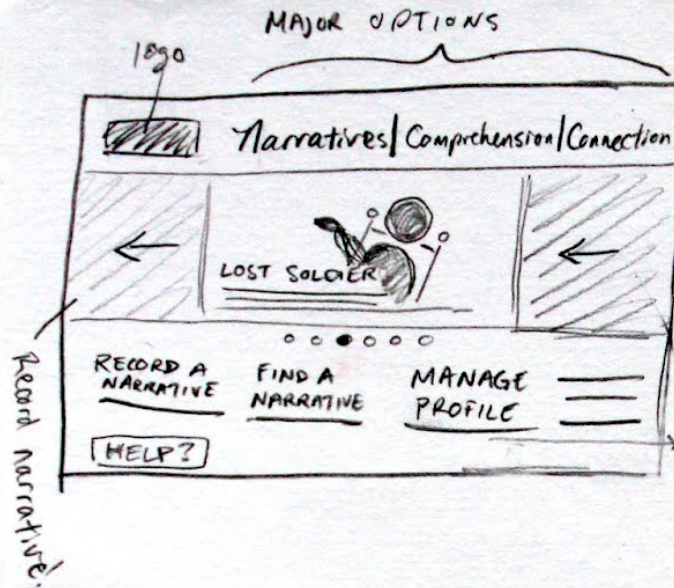
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TRANSLATION

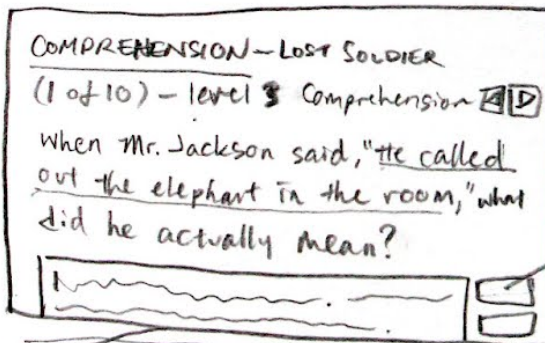
CONNECTION

ASK QUESTIONS



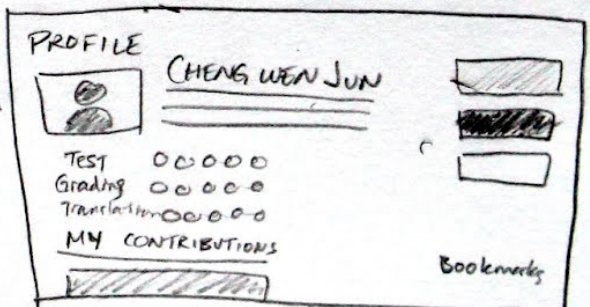
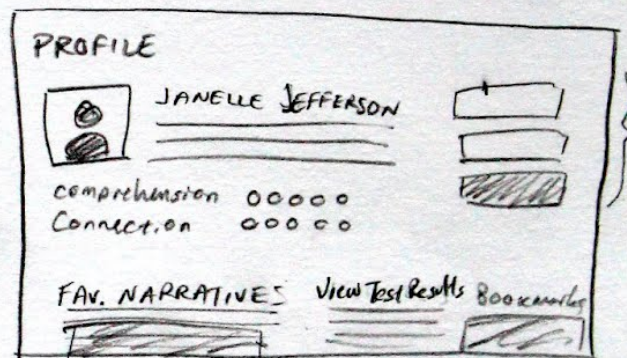
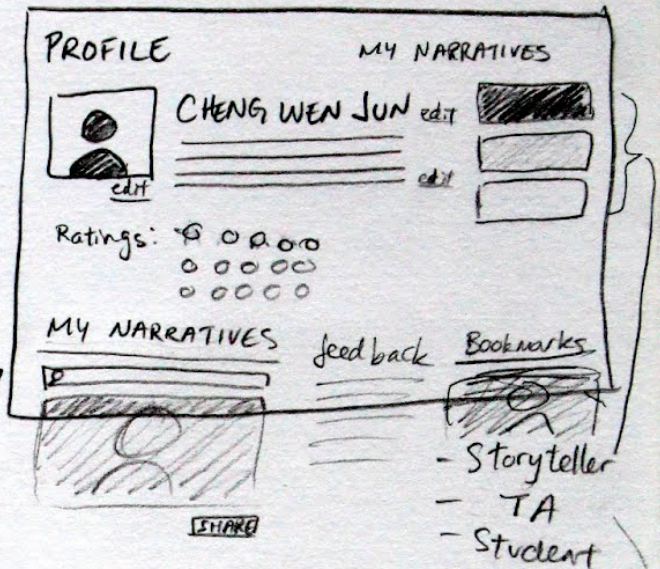


- DATE OF EVENT
- SUBJECT
- MOST RECENT
- DATE UPLOADED
- SPOKEN LANGUAGE
- STORY TELLER



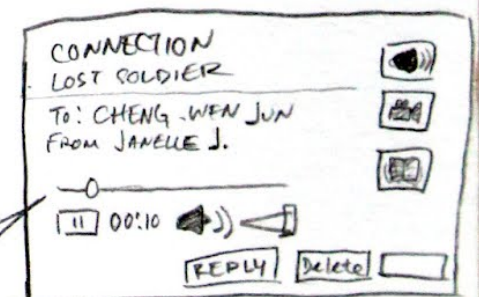
EVALUATION: SCORE: 8/10 80%

1. When Mr. Jackson...	X	✓	✓
2	✓	✓	✓
3	✓	✓	✓



MR. CHENG Both "Storyteller" and "TA"

see exact spot in text, audio or video



Hi, Mr. Cheng! I just watched your video and really wanted to thank you for sharing your story... I was reading...