

Running Head: EDUCATIONAL ALTERNATE REALITY GAME

Designing An Educational Alternate Reality Game

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Abstract

An educational alternate reality game (ARG) is a social learning experience that takes place in both the real and online worlds using various puzzles and activities tied together through an emerging storyline. This project described the design, development, and prototype testing of *Finding Identity*, an educational, social studies ARG about the history of the Japanese Americans during World War II. The three research topics that this research project addressed were (a) the definition of an educational ARG, (b) the pedagogical benefits of an educational ARG, and (c) the features that could be included in an educational ARG instructional design model. Evaluation of the *Finding Identity* ARG found that ARGs have pedagogical benefits that can foster significant learning of new topics. However, because ARGs are a relatively new phenomenon, additional research is needed to fully ascertain their instructional potential.

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CHAPTER ONE

INTRODUCTION

Video games have become a part of today's mainstream culture. About 75% of children in the United States now play video games (Thai, Lowenstein, Ching, & Rejeski, 2009). The video and computer game industry generated nearly \$20 billion in 2009, up from \$8 billion in 2000 (Boston Herald, 2010), and people are spending more than twice the amount of money on video games than on going to the movies (The Wall Street Journal, 2010).

Social gaming is a new genre of gaming. Social games differ from traditional video games because of their emphasis on the social aspects of gaming. For example, social games emphasize communication between players and collaboration among teammates. Multiplayer online role-playing games, such as *World of Warcraft*, are popular social games largely because of the social aspects of the game. Recently, social gaming has had a rapid increase in popularity because of the rise of social networking sites, such as Facebook, and mobile devices, such as Apple's iPhone. Zynga, the largest social game developer, now has more than 100 million unique users playing its games on various social networks (Zynga, 2009).

An alternate reality game (ARG) is a new type of social gaming experience. An ARG is a game that takes place in both the real and online worlds using both new and traditional media. The game play consists of a series of scenarios that lead players to collaboratively solve puzzles and accomplish activities. As players complete each task, the game presents new scenarios and eventually takes players through an entire storyline. Alternate reality games started as marketing promotions for movies and consumer

products and quickly became popular. In 2001, *The Beast* ARG launched as a marketing promotion for the movie *Artificial Intelligence: AI* and attracted a following of more than three million people (Kim, Allen, & Lee, 2008). Three years later, the *I Love Bees* ARG also reached the three million player mark as a promotion for the video game *Halo 2*.

The popularity of social and video games has led to a renewed interest in educational gaming. Research has shown that games can be effective educational activities (J. Vogel, D. Vogel, Cannon-Bowers, Bowers, Muse, & Wright, 2006). Learning games can promote knowledge acquisition skills, critical thinking skills, and interpersonal skills (Hong, Cheng, Hwang, Lee, & Chang, 2009). The strong belief in the pedagogical benefits of educational gaming has led to the opening of a New York charter school, Quest To Learn, which teaches its curriculum using game-based learning techniques (Olsen, 2009).

Alternate reality games have recently become recognized as potential educational activities. In 2007, *World Without Oil*, an ARG that simulated a real-world oil crisis, was the first large-scale ARG with an educational purpose (Ash, 2008). Connolly (2008) has created an educational ARG to teach modern foreign languages. There are several potential educational benefits of teaching through ARGs. Moseley (2008) mentions the following potential learning benefits of ARGs: engagement and motivation, problem-solving skills, and collaboration with peers and community.

In schools, students can learn practically any type of subject matter through the use of games. This research project discusses the development of an educational ARG for a high school social studies class. However, this research is intended to focus on the overall application of ARGs to education in general instead of a specific subject matter.

The motivation for this research is to contribute some practical findings and recommendations to the limited number of studies that exist about the application of ARGs to education.

Statement of Purpose

The purpose of this research project was to develop an educational alternate reality game that incorporates established learning theories and principles. In addition, this project explored possible features that could be incorporated into an educational alternate reality game instructional design model.

In this project, the author investigated the following three areas: (a) the definition of an educational ARG, (b) the pedagogical benefits of an educational ARG, and (c) the features that could be included in an educational ARG instructional design model.

Rationale

This project's educational ARG helps the Go For Broke National Education Center fulfill its mission to develop educational social studies curriculum materials. The Go For Broke National Education Center is a nonprofit, educational organization whose mission is to teach the story of the Japanese American World War II veteran's experience.

Because today's high school history textbooks typically contain minimal content about the Japanese American World War II experience, the organization would like to create some compelling instructional material that can provide more in-depth material about this topic. An educational ARG can provide more in-depth material than a textbook and also better engage students in a contextual learning experience. Furthermore, an educational ARG should combine the basic fundamental gameplay of traditional ARG

with relevant learning principles and theories, such as active learning, collaborative learning, scaffolding, situated learning, problem-based learning, multimodal learning, and motivation.

Operational Definitions of Terms

This project utilized various terms related to the project's media (alternate reality game) and content (Japanese American history). This section provides a description of the terms used in the educational ARG, including terms related to the game's main website and Japanese American history.

Alternate Reality Game Terms

Puppetmaster. The person(s) responsible for controlling the ARG game flow (Kim, Lee, Thomas & Dombrowski, 2009).

New Media. Digital media, including media available on the Internet, such as websites, blogs, and streaming video.

Traditional Media. Analog and print media, such as television, radio, books, magazines, and postal mail.

Groups. Teams of players who collaborate to solve puzzles and perform group activities during the ARG.

Scenarios. Individual story segments that include puzzles or activities for groups to solve in order to unlock new scenarios.

Leaderboard. A section on main website that displays a hierarchical listing of groups based on point totals accumulated during the game.

Game Discussion Forum. A section on main website in which players can post messages related to the game.

Japanese American History Terms

Executive Order 9066. United State presidential order signed by Franklin D. Roosevelt on February 19, 1942 that led to the incarceration of 120,000 Japanese Americans (Japanese American National Museum, 1993).

Internment Camp. Camps administered by the United States War Relocation Authority built to incarcerate Japanese Americans during World War II (Japanese American National Museum).

442nd Regimental Combat Team. Segregated United States Army regiment consisting of Japanese American soldiers who fought in Europe and earned several military honors (Japanese American National Museum).

Resettlement. Migration of Japanese Americans from the internment camps at the end of World War II (Japanese American National Museum).

Assumptions and Limitations

The author made the following assumptions about this project:

1. Game participants had access to an Internet-enabled computer or mobile device.
2. Game participants had broadband Internet access.
3. Game participants had some computer experience.
4. Game participants were able to read and write English at a high school level of proficiency.
5. The Internet infrastructure of the game, including websites, mail and messaging servers, and video servers, did not have any downtime during the gameplay.

6. No outside persons attempted to sabotage the game (e.g., a hacker who infiltrates the game discussion board).

The author established the following limitations of this project:

1. The learning content is specific to social studies curriculum, so therefore the transferability of this type of project to other subjects is unknown.
2. Due to the highly structured nature of this project's alternate reality game, the results of this project may not apply to other more openly structured alternate reality games (e.g., public games).

Overview of Remaining Chapters

This research consists of five chapters. Chapter One provides background information about educational gaming and ARGs, a statement of purpose, details about the rationale of the project, an operational definition of terms, and assumptions and limitations of the research. Chapter Two reviews the related literature regarding the definition of an educational ARG, the pedagogical benefits of an educational ARG, and features that could be included in an educational ARG instructional design model. Chapter Three describes details about the evaluation plan, including information about the participants, research methodology, instruments, and procedures. Chapter Four provides a detailed description of the *Finding Identity* ARG, including a needs assessment, instructional strategy analysis, project description, production work plan, and an estimated budget. Finally, Chapter Five contains details about the findings, recommendations, and conclusions of the research project.

CHAPTER TWO

REVIEW OF LITERATURE

An alternate reality game (ARG) is a new type of social gaming experience. Starting in 2001, ARGs emerged as marketing promotions for movies and consumer products, but recently ARGs have become recognized as effective educational activities.

This chapter is a review of literature that relate to ARGs and their educational benefits. In particular, the literature pertains to the three main research areas that this research project addresses: (a) the definition of an educational ARG, (b) the pedagogical benefits of an educational ARG, and (c) the features that could be included in an educational ARG instructional design model. To address these areas, this chapter covers information about the following: background and definition of an ARG, pedagogical benefits of an educational ARG, and instructional design models for developing an educational ARG.

Defining an Alternate Reality Game

An investigation of whether an ARG can be used as an effective educational tool begins with a proper definition of an ARG. A review of the literature about completed ARGs and their various features can provide a clear understanding of the ARG genre.

Completed Alternate Reality Games

The Beast. As a promotion for the movie *Artificial Intelligence: A.I.* in 2001, *The Beast* was one of the first highly successful ARGs (Kim, Allen, & Lee, 2008). *The Beast* started off with movie advertising posters with hidden clues that sent people on a puzzle-solving expedition through the real and online worlds to figure out specific information related to the movie. Eventually, an estimated three million people either played or

followed *The Beast* in less than six months (Kim, Allen, et al.). The core group of players named themselves *The Cloudmakers*, which eventually grew into a community of over 7,000 actively playing members, whose collective intelligence was so powerful that it required the designers of *The Beast* to have to completely alter the game structure (McGonigal, 2003).

I Love Bees. Three years after *The Beast*, the producers of the video game *Halo 2* commissioned the *I Love Bees* ARG to serve as a pre-release promotional activity (Kim, Lee, Thomas, & Dombrowski, 2009). The ARG started with various game industry people receiving a package containing a jar of honey and a website address (www.ilovebees.com) (Kim, Lee, et al.). At the same time, onscreen advertisements for *Halo 2* contained flashes of the same website address (Kim, Lee, et al.). The website held clues to a story about an alien who was marooned on earth and needed the ARG players' help to escape back to its own universe. The ARG contacted players via pay phones, cell phones, email, and other media to unlock story segments (Kim, Lee, et al.). When the game finally concluded, players were invited to events where they were able to play *Halo 2* before the official release of the video game (International Game Developers Association [IDGA], 2006).

World Without Oil. In April 2007, three years after *I Love Bees*, the *World Without Oil* ARG simulated a real-world oil crisis and asked players to share their reactions in the form of blogs, videos, images, and any other online media (Ash, 2008). Over the course of 32 days, with each day simulating one week, the game attracted more than 1,900 players and 60,000 observers (World Without Oil, 2007). *World Without Oil* is significant in that it was the first large-scale ARG that had an educational purpose

(Ash). After the completion of the game, two educators teamed up to create a series of lesson plans based on *World Without Oil* to use in classrooms (Ash). Despite its educational purpose, *World Without Oil* has been criticized in the ARG community as not being an authentic ARG because the game did not contain a collaborative storyline with a trail of puzzles to solve (Brackin, 2008).

Alternate Reality Game Features

The aforementioned ARGs have features that are descriptive of the ARG genre. This section contains a review of these features in order to present the basic fundamentals of an ARG. These features include an ARG's game environment, game type, social network, collaborative storytelling, use of new media and technology, and pervasive and emergent gameplay.

Game environment. Although technically a form of massive multiplayer online game (MMOG), ARGs are an entirely new genre of gaming (IGDA, 2006). In MMOGs, large number of players participate in an online game; however, ARGs differ from MMOGs in that the typical MMOG takes place inside a single program or website, whereas an ARG takes place anywhere in the entire online and real worlds (IGDA). Brackin (2008) has described an ARG as a blending of online interactive fiction, online social networking communities, and online interactive games. However, because part of the ARG experience occurs in the real world, ARGs are not just an online only experience. McGonigal (2003) has described the ARG environment as less of a virtual reality world, such as *Second Life*, and more of an alternate reality world that takes place in both the real and online environments. McGonigal has used the term *immersive gaming* to describe the realism that players experience while participating in an ARG. In

fact, the well-known ARG phrase, “this is not a game” (McGonigal, p. 2), refers to the ARG players’ believing that they are not actually playing a game but are instead participating in a real-life experience (McGonigal). Brackin has identified immersive elements as a critical component of ARGs. For example, in the 2005 ARG, *Art of the Heist*, the compelling storyline, engaging puzzles, and live events were all immersive elements critical to the game (Brackin).

Game types. The International Game Developers Association has identified five different types of ARGs: promotional, grassroots, productized, single-player, and educational (IGDA, 2006). Promotional ARGs are designed to promote a product or event and are the most high profile type of ARG. Grassroots ARGs are smaller productions that are often funded and designed by one person or small groups and are generally focused on a specific interest area. Productized ARGs are ARGs packaged as commercial products, such as the off-the-shelf game, *Majestic*. Single-Player ARGs are designed for individual play, but because single-player ARGs do not contain the social experience that defines an ARG, this may not be a true sub-genre. Finally, educational ARGs are designed to educate or train people in schools or organizations. In contrast to the five types defined by the IGDA, Brackin (2008) has divided the ARG genre into three main sub-genres: commercial ARGs (those with a stated corporate or commercial agenda), non-commercial ARGs (medium- to large-scale ARGs with no commercial agenda), and grassroots (same as the IGDA’s sub-genre definition).

Social network. Brackin (2008) has called social networking “the backbone of ARG” (p. 7) because an ARG is mostly a social experience. He has described an ARG social network as having a self-organizing structure, which refers to the natural tendency

of the players to organize themselves into casual, active, or enthusiastic player roles.

Kim, Lee, et al. (2009) have defined ARGs as “digital social experiences” (p. 1), which require people to form social networks to collaborate on problems and activities. Kim, Lee, et al. have explained that social networks not only allow players to collaborate but also motivate the players through peer encouragement and recognition.

As with any social networking experience, participation is vital to the success of an ARG (Kim, Allen, et al., 2008). A successful ARG requires that people build communities which lead to the formation of a powerful collective intelligence that can find solutions as the ARG evolves (McGonigal, 2003). In fact, many ARG designers create puzzles that no single individual can solve, such as one in which clues are distributed to different locations or in different languages, so that players must build communities in order to win the game. An interesting phenomenon about ARG social networks is that the participation in these networks is purely voluntary (Kim, Allen, et al.). No one pays the players to participate in ARGs, yet people spend long hours collaborating, solving puzzles, and furthering a storyline simply for their own personal enjoyment. Nonprofit and business organizations that rely on volunteer help can learn from ARGs in order to utilize the power of a social network of volunteers (Kim, Allen, et al.).

Collaborative storytelling. If the social network is the backbone of an ARG, the collaborative storytelling is the glue that holds an ARG together because it is the story that ties together all the elements of an ARG (Kim, Lee, et al., 2009). A main goal of an ARG is to create an immersive storyline. A compelling plot moves an ARG forward and can attract and retain a large number of players (Brackin, 2008; Kim, Allen, et al., 2008).

Today, storytelling is becoming more interactive and participatory, and this new type of storytelling is likely to replace more passive entertainment activities, such as reading newspapers or watching television (Kim, Lee, et al.).

An ARG storyline has some unique characteristics. First of all, a well-written ARG storyline is easy to understand so that the story can be easily explained to new people and allow news of the ARG to spread virally (Kim, Allen, et al., 2008). An ARG story unfolds in real-time (Brackin, 2008) and is not bound by any one particular media because the story is communicated through all types of media, such as email, video, and websites (Kim, Lee, et al., 2009). Finally, the ARG story is always divided into segments so that players can collaboratively discover or help create each part of the story before moving on to the next story segment (Kim, Lee, et al.).

Through the collaborative process of solving puzzles and completing activities, the players control how fast the story moves along and the direction the story takes (Kim, Lee, et al., 2009). Successful ARGs allow players to control the story; unsuccessful ARGs have stories that can lead nowhere or are purposely derailed into chaos in a process referred to as “gamejacking” (Brackin, 2008, p. 52). The ARG design team includes a *puppetmaster*, who is usually one person and is responsible for controlling the storyline (Brackin; Kim, Lee, et al.). The continuous give and take between the puppetmaster and players is an essential element of collaborative storytelling in an ARG (Brackin). Kim, Lee, et al. have likened the interaction between the puppetmaster and players to jazz because the story requires constant improvisation as it develops in usually unforeseen ways.

Use of new media and technology. The emergence of new media, such as user-created videos, text messaging, blogs, wikis, discussion forums, and social networking sites, has made possible new social entertainment activities such as ARGs (IGDA, 2006). An ARG is defined as being multimodal and can utilize practically any available media available, online and offline (IGDA; Kim, Lee, et al., 2009; Thomas, 2006). The popularity of ARGs is fueled by the willingness of players to utilize several different media and technologies simultaneously (IGDA). This use of different media and technologies allows ARG players to receive constant feedback from other players and the game itself (Kim, Lee, et al.). In addition, the variety of media provides additional ways to draw new players into the game and lets these new players have more communication options (Kim, Lee, et al.).

Pervasive and emergent gameplay. An ARG is pervasive in that the game is being played anytime and anywhere (IGDA, 2006; Thomas, 2006). Because an ARG is played nonstop throughout its duration, the game is always in a state of flux with no set states (Thomas). Contributing to the pervasiveness of the game, occasionally in an ARG, the game will contact players at any time of the day or night and via any communication medium (Thomas).

Additionally, ARGs have components of emergent gameplay. Brackin (2008) has described emergent gameplay in ARGs as the evolution of a game that does not follow a specific path. Because the ARG players are a part of the actual game itself, emergent gameplay occurs because of the variability involved in the various players' decisions that take place throughout the course of the game. The emphasis of the game therefore becomes the journey through the game instead of the final outcome (Thomas, 2006).

Pedagogical Benefits of Alternate Reality Games

Until now, most ARGs have not been specifically developed for educational purposes. However, ARGs have the potential to be effective learning activities. An educational ARG should combine the basic fundamental gameplay of traditional ARGs with relevant learning principles and theories, such as active learning, collaborative learning, scaffolding, situated learning, problem-based learning, multimodal learning, and motivation. This section examines the potential pedagogical benefits of these learning principles and theories as they pertain to an educational ARG.

Active Learning

An ARG promotes active learning because the gameplay requires players to be constantly engaged in activities such as solving puzzles and collaborating in discussion forums. Also, ARG players are creators of media, such as blogs, wikis, and online videos, instead of just consumers of media, and this “player as author” (de Freitas & Griffiths, 2008, p. 16) characteristic encourages active learning (de Freitas & Griffiths). Another way that an ARG promotes active learning is by making the player aware that the player-created content has a direct effect on the evolution of the game. The ARG game designers use the player-created content to design new plotlines or activities (Whitton, 2008). The awareness that their involvement is critical to the evolution of the game encourages players to maintain their activity throughout the entire game. An ARG also promotes activity among players by requiring them to work collaboratively during the game.

Collaborative Learning

Collaborative learning occurs in an ARG through the many group puzzle-solving activities involved in the gameplay. Much of the learning in an ARG occurs socially

through the community of players, with established players supporting and mentoring new players (Thomas, 2006; Whitton, 2008). An ARG also promotes collaborative learning through players creating learning content for other players, forming a peer-to-peer type learning community (de Frietas & Griffiths, 2008). The communication between players in this peer-to-peer type community occurs mainly through the use of both in-game and public discussion forums (Brackin, 2008). Another way that an ARG can promote collaborative learning is by dividing up related game-specific knowledge among different players so that the players have to share information with each other in order to succeed (Dunleavy, Dede, & Mitchell, 2009).

Scaffolding and the Zone of Proximal Development

Collaborative learning often requires the use of scaffolding techniques. An ARG provides an environment for scaffolding because the community of players provides helpful support for newer players (Moseley, 2008; Squire & Jan, 2007; Whitton, 2008). In a gaming community, players can recognize other players' expertise in specific areas (Squire & Jan). This recognition of expertise can enhance players' scaffolding opportunities during the game. The ARG itself can also provide scaffolding for players and help identify players' zone of proximal development, which is the difference between what a person can learn alone and what a person can learn with guidance (Vygotsky, 1978). An ARG can be effective at keeping a student in his or her zone of proximal development by first storing information about students and then providing appropriate challenges (Luckin, 2001).

Situated Learning

An ARG provides a situated learning environment because the game creates a real life context in which students can learn (Whitton, 2008). For example, in the *World Without Oil* ARG, learning occurred in the context of a world during an oil crisis (World Without Oil, 2007). An ARG allows players to learn through meaningful experiences in a time and place that is relevant to them (Thomas, 2006). The support that learners receive should also be relevant. Bruckman (2000) has stressed the importance of situated support, in which the context of learner support is just as important as the support content.

Problem-based Learning

The puzzles in an ARG promote problem-based learning for the players (Whitton, 2008). Moseley (2008) has noted that in an ARG, players often conduct lengthy research on unfamiliar topics in order to solve puzzles. Moseley has also pointed out that ARGs could allow students to select the starting level of problems, thus making problem-based learning more effective. Problem-based learning is often aided by the use of multimedia.

Multimodal Learning

Problems that utilize multimedia help to promote multimodal learning. Mayer (2001) has found that learning retention and transfer improves with the use of multimedia. An ARG promotes learning over multiple modes (Thomas, 2006). In particular, the visual and auditory media that the players and the game designer create are the primary modes through which students can learn in an ARG. The effective use of multimedia in an ARG can be a motivating factor for students to progress through the game.

Motivation

An ARG is motivational because the gameplay provides a series of stimulating and satisfying activities. Reiber (1996) has noted the importance of including voluntary, intrinsically motivating, and engaging play in a learning environment. In an ARG, players have high levels of motivation because of their length and depth of engagement in the game (Moseley, 2008). Dunleavy et al. (2009) have found that previously disengaged students become very engaged when placed into a gaming environment. Moseley has described three areas that motivate ARG players: solving puzzles, collaborating in communities, and hearing about new storyline developments. Similarly, players can become engaged in ARGs through four types of actions: completing, competing, curiosity, and communicating (Whitton, 2008). Playing in an ARG also increases motivation for students because of the positive emotions, such as pride and satisfaction, they experience from participating in the game (Markovic, Petrovic, Kittl, & Edegger, 2007; McGonigal, 2008).

The pedagogical benefits mentioned in this section are the reasons why instructional designers should develop educational ARGs. In regards to the actual development process, instructional designers would benefit from the existence of a game design model of an educational ARG.

Educational Alternate Reality Game Design Model

Alternate reality game designs are not only complex but also are continuously evolving. A game design model for a traditional ARG can help people understand the overall design and gameplay of a traditional ARG. Similarly, an instructional design model for an educational ARG can help individuals to understand the educational aspects

and learning goals of an educational ARG. However, because ARGs are such a new entity, there is no known literature at the current time that pertains specifically to an educational ARG instructional design model, although some literature exists about models for traditional ARGs and educational games. This section contains a review of the existing game design models and possible features that could be included in an educational ARG instructional design model.

Existing Game Design Models

Experiential gaming model. Kiili (2004) has created a model for educational computer games based on game design, experiential learning theory, and flow theory. Game design refers to the series of linked challenges that keep players motivated and engaged (Kiili). Experiential learning occurs when a person learns from direct experience and reflection of that experience (Kiili). Flow theory describes the feeling of *flow*, which is a sensation of complete engagement in an activity and refers to an optimal experience (Csikszentmihalyi, 1975). Kiili's experiential gaming model has combined game design with experiential learning in order to facilitate the flow experience.

International Game Developers Association (IGDA) model. Phillips (2006) has described IGDA's model of an ARG as a blending of exposition, interaction, and challenges. Exposition refers to the narrative storytelling element that is conducted through blogs, wikis, websites, and other media (IGDA). An ARG typically is heavier in exposition than traditional video games, and creating the exposition is a main part of the gameplay (IGDA). Interaction is possibly the defining characteristic of an ARG (IGDA). Interaction refers to the players interacting via chat, email, telephone, or other communication media with not only other players but also the in-game story characters

(IGDA). Challenges in an ARG consist of puzzles, games, and other real-world and online activities (IGDA). Although exposition, interaction, and challenges are three separate elements of this model, during actual gameplay, these elements often overlap (IGDA). A visual representation of this model might look a Venn diagram with three overlapping circles that represent each element.

Circular model of ARG development. Brackin (2008) has developed this model based on the 42 Entertainment (n.d.) inverted pyramid model of player participation in an ARG. In the inverted pyramid model, players are grouped into three levels: (a) casual player group, which has the most people and therefore makes up the base (top) of the inverted pyramid, (b) active player group, which makes up the middle of the inverted pyramid, and (c) enthusiastic player group, which has the least number of people and makes up the tip (bottom) of the inverted pyramid (42 Entertainment). The circular model of ARG development builds on this inverted pyramid model by taking into consideration the sub-activities or sub-games of an ARG (Brackin). A visual representation of the model resembles a pie chart, where each pie segment depicts a single trailhead (point of entry into an ARG) or storyline, and the size of each pie segment indicates the relative importance of a trailhead or storyline (Brackin). Because the shape of the model is a circle, the model can accommodate any number of different trailheads or storylines. Dena (2008) has described ARG *content tiering* as a system that provides for different trailheads by allowing the game producers or players to create separate content for the three different player levels (casual, active, and enthusiastic). Brackin has noted that in addition to presenting a visual representation of the anatomy of an ARG, the circular model of ARG development shows the various paths that go from casual to enthusiastic

player in the form of arrows on each pie segment. Furthermore, Brackin notes that two or more overlapping circles can visually represent parallel or sequel games that have the same player base or common storylines.

Additional Model Features

An effective educational ARG instructional design model should be able to show the structure and process of an ARG and incorporate various educational components. The three models described in the previous section provide a foundation for building an effective educational ARG model. The following are additional features that could be incorporated into an instructional design model for an educational ARG.

Learning goals and objectives. An educational ARG instructional design model should include learning goals and objectives. Carson, Joseph, and Silva (2009) have reported that smaller ARGs, often referred to as *mini-ARGs*, are designed to teach specific goals and objectives. However, even if an ARG has specific learning goals and objectives, the open-ended nature of the game means that players will sometime define other learning goals for themselves (Connolly, 2009). In addition, because of the emergent nature of the game, the ARG designer needs to occasionally adapt the design based on player inputs in order to guide players toward the learning goals and objectives (Carson et al.). An educational ARG instructional design model should be able to incorporate these various situations related to learning goals and objectives.

Assessment. An educational ARG instructional design model should also incorporate assessment activities. Chin, Dukes, and Gamson (2009) have advocated collecting assessment data during a game activity. Connolly (2009) has noted that teachers can use tests during or after activities. Chin et al. and Connolly have suggested

that instructors can also use pre- and post-game tests to assess learning. Overall, however, collecting assessment data in games is difficult because of the open-ended nature of game activities (Chin et al.). Also, because group work is a common feature in ARGs, there is also the difficulty of assessing individuals in a group setting. Pitt (2000) has noted that individual assessment in a group setting is difficult because students may be motivated more by grades than by teamwork. Individual assessment in a group setting may be made easier if an ARG can automatically track and record collaborative performance data (Connolly). Another issue that complicates the assessment process is the fact that assessment does not always come from a teacher but instead sometimes comes from other players or the game itself (Connolly).

Scoring system. An ARG can utilize a scoring system in which players receive points for completing various tasks, individually or in a group. Displaying the players' points online for other players to view not only can provide feedback to players but also can promote competition (Carson et al., 2009). Markovic et al. (2007) have demonstrated the effectiveness of using a class leaderboard in an augmented reality game.

Game and activity timelines. An online timeline can show players' progress in an ARG as the players complete each activity. Carson et al. (2009) have noted that such a timeline can provide organization of the game for players and groups.

An educational ARG instructional design model can conceivably incorporate other elements, such as player characteristics and state academic standards. In the future, new model features may arise as the ARG genre continues to evolve.

Discussion

The purpose of most of the existing literature about ARGs is to provide a description of completed ARGs, such as *The Beast* and *I Love Bees*. Some literature contains information about various educational ARG pedagogical benefits, which are described earlier in this chapter. In regards to an educational ARG instructional design model, a search for existing literature did not reveal any known literature of models specific to an educational ARG. However, the existing literature contains two design models of general ARGs and one educational games model, both of which may apply indirectly to an educational ARG. Overall, the existing literature provides a solid foundation for creating an effective educational ARG instructional design model that incorporates various learning principles and theories.

Missing Literature

Because ARGs are a relatively new phenomenon, the literature about ARGs is fairly limited. There is even less literature about educational ARGs. Researchers and designers of educational ARGs may benefit from new studies about possible pedagogical benefits. Also, more literature is needed about ARG design modeling and other educational features that may be incorporated into an educational ARG instructional design model.

Future of Educational Alternate Reality Games

Alternate reality games are a new genre of games that are not only fun and engaging but also may be educational. Over the past few years, designers have started to create the first ARGs with specific educational purposes. Educational ARGs are beginning to emerge in both K-12 education and organizational training programs

(Carson, Joseph, & Silva, 2009). Eventually, more educators may start to become familiar with the educational potential of ARGs. Instructional designers may then be asked to design new features and uses that may expand the pedagogical benefits of educational ARGs. As ARGs continue to evolve in the future, there may be the need for more extensive research about their educational effectiveness.

The Finding Identity Alternate Reality Game

The results of this project, the *Finding Identity* ARG, will provide additional information for future researchers of educational ARGs. Specifically, this project may be able to give educational ARG researchers insight into the application of the various learning theories and principles that were highlighted in this chapter. In addition, because this literature review has found there to be a lack of an instructional design model for an educational ARG, evaluation of the research methodology of the *Finding Identity* ARG may promote the development of such a model in the future.

The next chapter describes the evaluation plan of the *Finding Identity* ARG. The evaluation plan includes details about the participants, research methodology, instruments, and procedures.

CHAPTER THREE

EVALUATION PLAN

This chapter contains details about the prototype evaluation of the *Finding Identity* ARG. There are several advantages to creating a prototype of an educational game. Henson (1991) described five advantages for prototyping an educational software product: (a) promotes user involvement in the design of the software, (b) enhances communication between users and developers, (c) adapts to an environment that has dynamic specifications, (d) facilitates user feedback early in the development process, and (e) requires fewer resources than the traditional development approach. Prototype testing of the *Finding Identity* ARG allowed the author to implement changes after receiving feedback from all of the evaluations.

This evaluation plan contains information about the participants, research methodology, instruments, procedures, and results. The plan consists of three separate evaluations, each with its own methodology. Prior to describing each methodology, however, information about the participants groups is described because each methodology is participant-specific.

Participants

There were three sets of research participants in this project: (a) a single person, (b) a small group of subject matter experts, and (c) a larger group of people for a field trial. In the single person evaluation, the author demonstrated the ARG to a work colleague, who is experienced in website design and gaming, and then interviewed the colleague to receive feedback on the overall gameplay. In the subject matter expert evaluation, a former U.S. history teacher and an educational program professional served

as subject matter experts and were asked to go through the game and provide constructive feedback. Finally, in the field trial, four groups of four people each played through the entire ARG. Each of the three sets of research participants was associated with a specific research methodology in which to measure the performance of the ARG.

Research Methodology

The research methodology for this project consisted of both qualitative and quantitative analyses. Wong and Nor Azan (2009) found that qualitative data analysis, through interviews, questionnaires, and observations, along with quantitative data analysis, through pre- and post-game surveys, are both effective methods to evaluate educational games. In this project, qualitative research was collected for both the single person and subject matter expert evaluations. The single person evaluation was a face-to-face interview in which the author asked the evaluator specific questions about the design of the ARG. The subject matter expert evaluation used short-answer survey questions that provided qualitative feedback. The field trial evaluation was a quantitative analysis of pre- and post-game surveys given to the participants. The quantitative analysis consisted of inferential statistical tests to determine if there were any significant differences between the pre- and post-game survey data.

All three of the evaluations focused on evaluating the usability and effectiveness of the ARG. Based on the recommendations by Wong and Nor Azan (2009), the following characteristics were evaluated: learning content, gameplay, feedback, immersion, group interaction, and fun. Learning content evaluation was based on relevance (learning is relevant to the player), embedding (learning and gameplay function together seamlessly), and transfer (learning is transferable to other contexts) (Gunter,

Kenny, & Vick, 2007). In order to effectively evaluate these characteristics, proper evaluation instruments were developed.

Instruments

The evaluation instruments consisted of questionnaires and surveys. The questionnaires were designed to elicit feedback about the overall usability and gameplay. The surveys were focused on testing the learning objectives described in Chapter One.

The single person evaluation utilized an individual interview questionnaire (see Appendix A), which contained a series of six short-answer questions. The questions in the interview questionnaire were more general in nature about the player's experience in the ARG. For example, the individual evaluator was asked, "What suggestions do you have for improving the gameplay?" The questions were designed to elicit feedback on the gameplay elements, including the puzzles and activities, and the game's main website.

The subject matter experts' questionnaire (see Appendix B) was more specific about the learning content and gameplay than the single person interview questionnaire. The subject matter experts' questionnaire contained 11 short-answer questions focused on the evaluators' opinions about the pedagogy and learning effectiveness of the ARG. For example, the subject matter experts were asked, "How effective do you think the puzzles and activities are in educating players about the specific historical content and the various lessons that are embodied in the history?" The questionnaire was divided into two main sections, gameplay and content, in order to elicit feedback about the learning process (gameplay) and outcomes (content).

The field trial evaluation utilized both pre-game and post-game surveys (see Appendix C). The pre-game survey contained 13 questions about the participants'

knowledge of the history of Japanese Americans during World War II and experience with educational games, including ARGs. For example, one survey question was, “On a scale of 1 to 10, how much do you know about Executive Order 9066?” The post-game survey used similar questions to the pre-game survey in order to be able to measure the effect of participating in the ARG. The post-game survey also included six questions about the participants’ overall experience in playing the ARG. The questions in both pre- and post-game surveys were Likert scale or multiple-choice questions except for one short-answer question for comments and elaboration. In order to effectively utilize all of the instruments, specific procedures were followed to conduct the evaluations.

Procedures

The evaluation process was conducted over an approximate one-month period in the following order: single person evaluation, subject matter expert evaluations, and field trial evaluation. To conduct the single person evaluation, the author met in-person with the evaluator to review the entire ARG. During the evaluation, the author asked various questions about the evaluator’s opinion about the features and learning effectiveness of the game. At the conclusion of the evaluation, the author interviewed the evaluator using the single person questionnaire.

The subject matter expert evaluation started with detailed email instructions being sent to the subject matter experts. These instructions contained details about how to navigate through the entire game so that the evaluators could view the game in its entirety. Phone interviews were then conducted with each of the evaluators using the subject matter expert questionnaire.

In the field trial, the participants first were emailed a link to the pre-game survey, which all participants were required to complete prior to the start of the game. The participants were then sent a link to the first scenario of the game and instructed to proceed through the game to its conclusion. At the end of the field trial, an email link to the post-game survey was sent to each participant. The survey results from the field trial along with the feedback from the single person evaluation and subject matter experts were then examined to determine possible game modifications.

This chapter has described the evaluation plan conducted in order to test the usability and learning effectiveness of the *Finding Identity* ARG. The next chapter contains a detailed description of the ARG, including a needs assessment, instructional strategy analysis, project description, production work plan, and an estimated budget.

CHAPTER FOUR

DESCRIPTION OF THE INSTRUCTIONAL PRODUCT

This chapter contains details about the game elements and development process of the *Finding Identity* ARG. Using an ARG as an instructional medium is a relatively new idea in the realm of education. However, an educational ARG can present a unique solution to the challenge that many teachers face in finding more effective ways to educate students.

Needs Assessment

Teachers today are beginning to focus on pedagogy that emphasizes student engagement over knowledge transmission. Lessons that encourage the active participation and interest of the students have been found to achieve better learning and increase engagement in the classroom (Appleton, Christenson, & Furlong, 2008). Curriculum materials designers, such as curriculum specialists and educational organizations, need to concentrate on creating lessons that fully engage the attention of the students.

Instructional Problem

The Go For Broke National Education Center (GFBNEC) is a nonprofit, educational organization whose mission is to teach the history of the Japanese American World War II veterans. One of the organization's goals is to create standards-aligned, curriculum materials for high school history classes.

Prior to the start of this project, GFBNEC was looking to create an engaging instructional piece that could provide more in-depth learning than traditional textbook lessons. Also, because GFBNEC considers itself a technology leader in the educational

nonprofit sector, the instructional piece needed to be an innovative solution that utilized new technologies.

The instructional piece therefore needed to fulfill the following two California academic standards:

1. History-Social Science 11.7.3: Identify the roles and sacrifices of individual American soldiers, as well as the unique contributions of the special fighting forces (e.g., the Tuskegee Airmen, the 442nd Regimental Combat team, the Navajo Code Talkers).
2. Career Technical Education B1.0: Students understand the effective use of tools for media production, development, and project management (California State Board of Education, 1998).

Proposed Solution

The proposed solution was an educational ARG about the history of Japanese Americans during World War II. An educational ARG would be able to engage students in a contextual learning experience geared toward teaching more in-depth and higher level knowledge. In addition, because much of the game environment would be online, the ARG could introduce various new online technologies to the learners. In order for the proposed solution to be effective, however, the educational ARG needed to be built upon sound instructional strategies.

Instructional Strategies

The instructional strategies for the *Finding Identity* ARG identified the types of tasks to be included in the game. Development of the instructional strategies started with determining the learning goals and objectives of the game.

Learning Goals and Objectives

There were two main learning goals of this project. First, students would be required to learn about the history of Japanese Americans during World War II and the relevant lessons embodied in the history. Second, students would be required to learn how to utilize new technologies in creating and developing new media projects.

In order to fulfill both of these learning goals, the ARG had the following learning objectives:

After completing the *Finding Identity* ARG, students should be able to:

1. Describe the history of Japanese Americans during World War II by incorporating relevant historical content into at least three new media projects.
2. Explain how personal values, such as loyalty, sacrifice, and perseverance, are embodied in the history of Japanese Americans during World War II by incorporating ideas about these values into at least three new media projects.
3. Evaluate primary source historical information, such as oral histories and historical documents, by using the primary sources as evidence in at least three new media projects.
4. Create at least three new media projects using Web 2.0 and other online tools.

Learning Task Analysis

In order to fulfill the learning objectives, the ARG contained tasks that aligned with each of the objectives. Because all of the learning objectives required the creation of at least three new media projects, the ARG needed to provide activities and guidelines for creating these projects. The projects had to include content that pertained to the history of Japanese Americans during World War II and the values embodied in the history.

Therefore, the students were required to perform online research and discuss the historical content. The projects also required the evaluation of primary source historical information, so students were directed to use primary sources as evidence in their projects.

Audience Analysis

This project was developed for high school social studies students. There were no gender or racial requirements for the project, but students had to be able to communicate in English. Students were required to have medium to high computer skills and broadband access to the Internet.

The instructional strategies and analyses described in this section were used to create the *Finding Identity* ARG. The next section describes details about the game elements and details of the ARG.

Project Description

The *Finding Identity* ARG was more structured than a typical ARG, which often includes design changes during the gameplay in order to adjust to the players' actions. The *Finding Identity* ARG required more structure in order to cover a specific set of educational criteria and have a pre-determined duration. The additional structure also had an effect on the media selection of the game.

Media Selection

By definition, an ARG can utilize any type of media, including both online and traditional (offline) media. However, because the use of traditional media, such as phone calls and postal mail, would take much longer to plan and implement, the *Finding Identity* ARG used only online media. These online media included websites, online

tools, and an online discussion board. The websites were primarily used to provide information and resources for the ARG's scenarios and puzzles.

Scenarios and Puzzles

Scenarios and puzzles are the focal points of an ARG. In the *Finding Identity* ARG, the scenario development consisted of creating a storyline that would take the player through historical events that Japanese Americans experienced during World War II. The game had five scenarios, starting with the Pearl Harbor scenario and ending with the post-war resettlement scenario. The number of scenarios was selected in order to provide players with as much storyline as possible during the three-week game duration. Each scenario consisted of a web page that described the storyline and provided a link to the puzzle or activity for that scenario.

Puzzles in an ARG provide challenges that players must solve in order to proceed forward in the game. In the *Finding Identity* ARG, puzzles were used in three of the scenarios. Two of the scenarios did not utilize puzzles because the activities for these two scenarios were elaborate and complex enough that puzzles were not needed. Each puzzle had the following development requirements:

1. Puzzles had to have individual tasks for each group member.
2. Puzzles had to force each group member to find various educational resources related to the game's historical content.
3. Puzzles had to have the group members share their individual findings and then collaboratively figure out a final solution.
4. Puzzles had to be challenging but not so difficult that they would be too time-consuming.

After the group correctly identified the final solution to a puzzle, the activity for the scenario was revealed to them.

Activities

In the *Finding Identity* ARG, each scenario contained an educational activity in which groups collaborated to create various deliverables, such as a collaborative story. Each activity had the following development requirements:

1. Activities had to involve collaborative group effort in creating a product, such as a collaborative story.
2. Activities had to relate to the various historical resources contained in the puzzles.
3. Activities had to be challenging but not overly time-consuming (approximately three days per activity).

After completing each activity, the group received scores that were displayed on the game's website.

Website

The website of the *Finding Identity* ARG was not the same as an educational game website in which the entire game takes place on the website. Instead, the *Finding Identity* ARG's website functioned as a central coordinating point from which players received game information and feedback. The website contained a game section, administration section, and a game discussion board.

Game section. The game section was the player portion of the website that contained general game information, including pages for group details, game leaderboard, help, rules, frequently asked questions, and contact information. The game

section also displayed details about each scenario, puzzle, and activity. Links to specific scenarios, puzzles, or activities were not linked to the main website until after each scenario was completed.

Administration section. The administration section was a password-protected portion of the website that was only accessible to game administrators. The purpose of the administration section was to update player information, group information, and game scoring.

Discussion board. The game discussion board served as a communications portal for the players. Each player was required to register in order to obtain a user name and password to access the discussion board. Players had access to both a private group discussion forum along with forums for assignments and general comments.

Assessment Items

The final part of the product was the questionnaires and surveys used to evaluate the learning effectiveness of the ARG. Questionnaires containing short-answer questions were used for the single person and subject matter expert evaluations. Pre-game and post-game surveys that featured Likert scale and multiple-choice questions were given to the field trial participants of the ARG. The post-game survey also contained a general comment section for players to provide suggestions or opinions about the game experience.

The next section describes the production of all of the above elements of the *Finding Identity* ARG.

Production Work Plan

The development of the *Finding Identity* ARG took approximately 16 weeks, from December 2009 to March 2010. The development process consisted of designing and developing the game's main website, creating the scenarios, puzzles, and activities, setting up the game discussion board, and creating the assessment items.

Website

The game's main website production consisted of developing the administration and game sections. The administration section required two weeks to setup the database that stored the group and player game scores and program the scripts to add, edit, and delete group and player data. The game section took five weeks to create the navigation and content of the various pages, including the help, rules, frequently asked questions, and contact pages. In addition, as each scenario, puzzle, and activity was created, web pages for each of these were developed.

Scenarios, Puzzles, and Activities

Creation of the scenarios, puzzles, and activities required six weeks of development time. The development process consisted of creating each scenario, puzzle, and activity together as a set before moving on to work on the next set. Details for each scenario, puzzle, and activity were added to web pages that would be revealed to the players at appropriate times during the game.

Discussion Board

Although the discussion board was hosted on the same web server as the game's main website, the discussion board was developed separately using *Web Wiz Forums*, a

customizable discussion board software program. Steps to prepare the discussion board were as follows:

1. Download and install the software.
2. Prepare the database to hold the discussion board data.
3. Configure the discussion board.
4. Create the categories and forums.

After setting up the discussion board, a link to the board was placed on the game's main website. The discussion board required two weeks to setup and configure.

Assessment Items

The questionnaires for the single person and subject matter expert evaluations and the pre-game and post-game surveys took one week to develop. The questionnaires were created in Microsoft Word, and the surveys were created using *Kwik Surveys*, an online survey tool.

Schedule

Table 1 contains the completed schedule for the production work plan. The production started in December 2009 and continued for 16 weeks until the end of March 2010.

Table 1

Finding Identity ARG Production Work Plan

Task	Start Date	End Date
Website		
<i>Administration section</i>		
Setup database	12/6/2009	12/13/2009
Create scripts	12/13/2009	12/20/2009
<i>Game section</i>		
Design	12/20/2009	1/3/2010
Content pages	1/3/2010	1/17/2010
Scenario/puzzle/activity pages	2/28/2010	3/7/2010
Create Scenarios/Puzzles/Activities		
Set 1	1/17/2010	1/24/2010
Set 2	1/24/2010	1/31/2010
Set 3	1/31/2010	2/7/2010
Set 4	2/7/2010	2/14/2010
Set 5	2/14/2010	2/21/2010
Start & end scenarios	2/21/2010	2/28/2010
Discussion Board		
Setup database	3/7/2010	3/14/2010
Setup software/Configure forums	3/14/2010	3/21/2010
Assessment Items (Questionnaires, Surveys)	3/21/2010	3/28/2010

The next section describes an estimate of the budget items that were required to complete this production work plan.

Estimated Budget

The budget for this project was \$35,400. The budget included estimates for contracted personnel to create the website, discussion board, and the game elements, including scenarios, puzzles, and activities. In addition, the budget contained allowances for game evaluators and web hosting fees. The hourly rates in the budget were estimated using the State of California's Occupational Guide (California Occupational Guides, 2010). Table 2 displays a breakdown of the budget of the *Finding Identity* ARG.

Table 2

Finding Identity ARG Budget

Budget Item	Hours	Hourly Rate	Total Cost
Website Design and Development			
Website			
Website Designer	20	\$50	\$1,000
Website Developer	120	\$60	\$7,200
Administration Section			
Database Developer	20	\$60	\$1,200
Script Developer	60	\$60	\$3,600
Discussion Board Setup	80	\$60	\$4,800
Game Development			
Instructional Designer	240	\$50	\$12,000
Assessment Items			
Instructional Designer	40	\$50	\$2,000
Game Evaluation and Testing			
Subject Matter Experts	40	\$40	\$1,600
Field Testing	120	\$15	\$1,800
Website Fees			
Website Hosting			\$200
TOTAL			\$35,400

The website budget contained estimates for the design and development of the game's main website and the administration section. The personnel required to create the website included a website designer (20 hours x \$50/hour) to design the website, a website developer (120 hours x \$60/hour) to program the website, a database developer (20 hours x \$60/hour) to setup and configure the database, and a script developer (60 hours x \$60/hour) to program the administration section's data forms.

The discussion board budget was for a technical person (80 hours x \$60/hour) to setup and configure the database to store the discussion data, install the discussion board software, and setup the discussion forums.

The game development budget covered the cost of an instructional game designer (240 hours x \$50/hour) to create all of the scenarios, puzzles, and activities of the ARG. This was the most time-consuming and therefore highest cost item in the budget.

Creation of the assessment items, including the questionnaires and surveys, required a budget for an instructional designer (40 hours x \$50/hour).

Game evaluators were the subject matter experts (40 hours x \$40/hour) who provided feedback on the ARG via the questionnaires. Field testers (120 hours x \$15/hour) were the participants in the field test of the ARG prototype.

Finally, website fees (\$200) covered the cost of web and database hosting costs.

This chapter has presented details about the *Finding Identity* ARG and the development process used to create the game. The next chapter contains the findings, recommendations, and conclusions of this project.

CHAPTER FIVE

FINDINGS, RECOMMENDATIONS, AND CONCLUSIONS

This project introduced the initial design of the *Finding Identity* ARG. In order to make the next iterations of the ARG into better learning activities, continuous improvements in the game will need to be made. Analysis of the findings of this project is the start of this improvement process.

Findings

The evaluation of the *Finding Identity* ARG consisted of three separate processes: a single person evaluation, a subject matter expert evaluation, and a field trial evaluation. The single person and subject matter evaluations produced qualitative results from questionnaire responses. The field trial evaluation provided quantitative data from the pre-game and post-game surveys filled out by the participants.

Single Person Evaluation

The single person evaluation was performed by a website designer, so the recommendations primarily pertained to the game's main website. The evaluator had two main recommendations for the website: 1) Add a "Need Help" link on each assignment or puzzle page, and 2) At the end of each scenario page, change the text links to buttons in order to emphasize the links. Both of these recommendations were implemented in the game prior to the field trial evaluation.

Subject Matter Expert Evaluation

The two subject matter evaluators made recommendations that pertained to both the learning content and pedagogy. One evaluator suggested that the content in each assignment contain more resources, such as website links to background information. The

other evaluator recommended that the game include content on the proper use of primary and secondary sources. Regarding the pedagogy of the ARG, both evaluators felt that there needed to be a final assignment as a reflection exercise at the end of the game. One evaluator thought that there should be more formative assessment during each activity and that students should be made aware that they could ask for formative assessment at any time. The other evaluator suggested that the game include better guidelines for commenting in the discussion forum in order to facilitate better social learning. Other recommendations included increasing the point values of each successive assignment in order to maintain player motivation throughout the game and finding new ways to encourage collaborative learning in a competitive environment.

Field Trial Evaluation

The results of the field trial evaluation came from the pre-game and post-game surveys taken by the field trial participants. Both surveys asked identical questions related to the learning objectives of the ARG. The pre-game and post-game data were compared using paired t-test statistical analyses. Of the six questions that pertained directly to the learning objectives, two revealed a significant difference between the pre-game and post-game data. These two questions were: (a) How much do you know about the history of the Japanese American segregated military units during World War II? ($t = 0.0449$), and (b) How much experience do you have in evaluating primary source historical information, such as oral histories, photographs, or historical documents? ($t = 0.0136$). Therefore, the *Finding Identity* ARG was found to have made a significant difference in learning about these two topics. The four topics that did not show a

significant difference in the data pertained to the attack on Pearl Harbor, Executive Order 9066, Japanese American internment, and using online tools.

The post-game survey also contained an area for general comments. Almost all of the comments were positive about the game experience. For example, one participant responded: "...I also liked the fact that we were learning something meaningful while we were playing, both historically and technologically. I thought the game was well thought out in content and allowed the players to push the boundaries of creativity." Also, a recommendation that two participants mentioned in their comments was to include scoring rubrics for all assignments and discussions.

Recommendations

The next iteration of the *Finding Identity* ARG will implement many of the recommendations provided by the evaluations. These recommendations pertained to both the game content and the gameplay.

Regarding game content, more resources and guidance will be provided in order to help those students that need help getting started on assignments. Also, depending on time availability, a final reflection assignment could be added to the end of the game. Scoring rubrics for assignments and discussions will also be implemented. Finally, the puzzles and activities for the four topics that did not show a significant difference in the quantitative analysis (the attack on Pearl Harbor, Executive Order 9066, Japanese American internment, and using online tools) will all be analyzed and possibly redesigned to promote better learning.

The ARG's gameplay could also be improved to promote better learning. The game could include specific guidelines and mechanisms for providing formative feedback

during each assignment. Also, for each commenting phase, better instructions and guiding questions could be provided to promote more social learning from peers in the game. In addition, if players are made aware that the commenting phase has no effect on the other groups' assignment scores, comments would be more directed at promoting learning rather than criticizing the work of other groups. Also in regards to scoring, the point values could be changed to increase for each successive assignment instead of the current system of equal point values for all assignments. Using an increasing point scale could help to keep groups better motivated throughout the entire ARG.

Conclusions

This purpose of this project was to conduct research on educational ARGs. Specifically, the project examined three main research topics: (a) the definition of an educational ARG, (b) the pedagogical benefits of an educational ARG, and (c) the features that could be included in an educational ARG instructional design model.

The literature review in Chapter Two covered the first topic about the definition of an educational ARG. In the literature review, the author described an educational ARG as a social learning experience that takes place in both the real and online worlds using various puzzles and activities tied together through an emerging storyline. The field trial was designed to meet this definition of an educational ARG.

Regarding the second topic, the literature review contained potential pedagogical benefits of ARGs to include active learning, collaborative learning, scaffolding, situated learning, problem-based learning, multimodal learning, and motivation. During the field trial evaluation, the author found that the *Finding Identity* ARG was able to take advantage of these pedagogical benefits to promote significant learning.

Finally, educational design model features were also discussed in the literature review, which examined such features as experiential learning, exposition, interaction, challenges, content tiering, learning goals and objectives, assessment, scoring systems, and timelines. The *Finding Identity* ARG included many of these features in the field trial evaluation. In addition, the subject matter experts suggested other potential model features, such as the use of a final assignment to enable learner reflection and metacognition.

Additional Research

Because ARGs are a relatively new phenomenon, limited research exists about their educational application. As noted in Chapter Two, there is the need for additional research on the pedagogical benefits of educational ARGs. In addition, further research is needed to develop proven educational ARG instructional design models.

Other areas of additional research related to game-based learning were revealed through the evaluation of this project. First, there is the need for additional research on the balance of competition and social learning in a collaborative game environment. More research is also needed on the motivational and learning consequences of using a point scoring system for groups and individuals. In addition, studies on the effects of peer grading in a collaborative game environment would be valuable to the research community. Finally, additional research is needed on the effectiveness of a reflection-oriented, commenting phase during a collaborative game.

As educational ARGs continue to evolve, there will undoubtedly be several other areas in which additional research will be needed. A goal of the next iteration of this project is to uncover some of these new areas of study.

Summary

This paper has described the design, development, and evaluation of an educational ARG project. The project started with a needs assessment and instructional strategy analysis. A literature review was then conducted to determine the existing research on educational ARGs. After this research was completed, the *Finding Identity* educational ARG was designed and then developed over a 16-week schedule. Finally, the project concluded with an analysis of the findings and a presentation of recommendations for future educational ARG development.

The author plans to improve upon the design of the *Finding Identity* ARG based on the recommendations of this project. Future plans exist to implement the game on a larger scale in a few high school classes and possibly in a university course.

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Appendices

Appendix A

Single Person Evaluation Questionnaire

1. What is your overall impression of the game?
2. Do the game tasks seem more like schoolwork or play?
3. What parts seem like the most fun? What parts seem the most boring?
4. What suggestions do you have for improving the gameplay?
5. What lessons about history do you think students can learn through playing this game?
6. What is your opinion about the game's website (appearance and function)?
7. How could the game's website be improved?

Appendix B

Subject Matter Expert Evaluation Questionnaire

Content Questions

1. How well do you think the game teaches about the history of Japanese Americans during World War II?
2. How well do you think the game teaches about the values that are embodied in the history of Japanese Americans during World War II? Which values?
3. How well do you think the game teaches about evaluating primary source historical information, such as oral histories, photographs, or historical documents?
4. How well do you think the game teaches about using online tools (social networking, blogs, wikis, video conferencing, streaming video, etc.)?
5. How well do you think the game teaches about participating in team-based, collaborative projects?

Gameplay Questions

1. How effective do you think the puzzles and activities are in educating players about the specific historical content and the various lessons that are embodied in the history?
2. What suggestions do you have for improving the scenario?
3. What suggestions do you have for improving the gameplay?
4. What suggestions do you have for improving the learning in the game?

Appendix C

Field Trial Survey Questions

General Questions

1. What is your gender? (Male, Female)
2. What is your computer proficiency level? (Excellent, Good, Neutral, Fair, Poor)
3. Do you enjoy playing computer or video games? (Yes, very much; Yes, sometimes; They are OK; No, not too much; No, not at all)
4. How effective do you think games can be in educating students? (Very effective, Effective, Neutral, Ineffective, Very ineffective)

Content Questions

1. How much do you know about how the attack on Pearl Harbor on December 7, 1941 affected the Japanese American people? (1=Novice, 10=Expert)
2. How much do you know about Executive Order 9066? (1=Novice, 10=Expert)
3. How much do you know about the history of the Japanese American internment camps during World War II? (1=Novice, 10=Expert)
4. How much do you know about the “Loyalty Questionnaire” given to people in the internment camps in 1943? (1=Novice, 10=Expert)
5. How much do you know about the history of the Japanese American segregated military units during World War II? (1=Novice, 10=Expert)
6. Can you describe any values that are embodied in the history of Japanese Americans during World War II? (Yes, No) If Yes, what are one or more of these values?

7. How much experience do you have in evaluating primary source historical information, such as oral histories, photographs, or historical documents? (1=Novice, 10=Expert)
8. How much experience do you have in using online tools (social networking, blogs, wikis, video conferencing, streaming video, etc.)? (1=Novice, 10=Expert)
9. How much experience do you have in a team-based, collaborative projects (online and/or in-person)? (1=Novice, 10=Expert)

Post-game Survey Questions (in addition to the above questions)

1. Did you enjoy playing the game? (Yes, very much; Yes, pretty much; It was OK; Just a little; Not much)
2. How was the overall workload in the game? (Very high, Somewhat high, Just right, Somewhat low, Very low)
3. How many hours per week (approx.) did you spend on the game? (1 to 10+)
4. Do you feel like you learned something meaningful from playing the game? (Yes, No)
5. Would you play this type of game again in the future? (Yes, No, Maybe)
6. Please write any additional comments or suggestions here.

Appendix D

Screenshots

Figure D1. Home Page

FINDING IDENTITY
AN ALTERNATE REALITY GAME ABOUT THE HISTORY
OF JAPANESE AMERICANS DURING WORLD WAR II

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Finding Identities

Finding Identities is a game that blends the real and online worlds and utilizes various types of media (traditional and/or new media). The gameplay consists of a series of scenarios that lead players to collaboratively solve puzzles and accomplish activities. As players complete each task, the game presents new scenarios and eventually takes players through an entire storyline.

[Click here to view the promo video](#)

LEARNING OBJECTIVES
After completing this activity, the participant will be able to:

- Describe the Japanese American internment experience
- Describe the Japanese American segregated military units
- Explain how the values of loyalty, sacrifice, and perseverance are embodied in the history of Japanese Americans during World War II
- Evaluate primary source historical information, such as oral histories, photographs, and historical documents
- Create collaborative projects using various online Web 2.0 tools

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Figure D2. Groups



FINDING IDENTITY

AN ALTERNATE REALITY GAME ABOUT THE HISTORY OF JAPANESE AMERICANS DURING WORLD WAR II

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Groups

Goro's Gang	Poston is Postin'
Jayne H.	Andy A.
Pam F.	Kurt K.
Shari T.	Shari K.
Stacey H.	Teri K.
Randy's Guineas	There And Back Again
Ken I.	Jolene M.
Lecia B.	Maya F.
Lisa S.	Stephanie Y.
Robert R.	Yumi S.

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Figure D3. Leaderboard



FINDING IDENTITY

AN ALTERNATE REALITY GAME ABOUT THE HISTORY OF JAPANESE AMERICANS DURING WORLD WAR II

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Leaderboard


Group	A	D	B	Total
Goro's Gang	50	48	25	123
Randy's Guineas	48	47	25	120
Poston is Postin'	47	47	25	119
There And Back Again	49	41	23	113

A = Assignments Score
D = Discussions Score
B = Bonus Score

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Figure D4. Scenarios



FINDING IDENTITY

AN ALTERNATE REALITY GAME ABOUT THE HISTORY OF JAPANESE AMERICANS DURING WORLD WAR II

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Scenarios

This page contains links to the active and completed scenarios. New scenarios are revealed to players after completing each task.





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[Scenario](#)
[Assignment #1](#)

December 7, 1941
[Scenario](#)
[Assignment #2](#)

Executive Order 9066
[Scenario](#)
[Assignment #3](#)

Japanese Americans in the Military
[Scenario](#)
[Assignment #4](#)

Resettlement
[Scenario](#)
[Assignment #5](#)

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Figure D5. Scenarios – Start



FINDING IDENTITY

AN ALTERNATE REALITY GAME ABOUT THE HISTORY OF JAPANESE AMERICANS DURING WORLD WAR II

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This morning, you woke up from a dream...

...only to find that you were still in the dream.

You find yourself living in 1941 in the small farming town of Reedley, California. You are a member of the Takahashi family, a large Japanese American family consisting of two grandparents, a father, a mother, and six children.



In order to wake up from this dream, you will need to survive through the duration of World War II as a member of the Takahashi family.



How will you do this? What will happen next?

[Click here to learn how to proceed](#)

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Figure D6. Assignment #1 – Group Name

FINDING IDENTITY

AN ALTERNATE REALITY GAME ABOUT THE HISTORY
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Assignment #1 - Group Name

To help you survive the duration of the war as a member of the Takahashi family, you will enlist the help of three teammates (who are also living in this dream world).

Your first group assignment is to:

Introduce yourself to your group and create a name for your group.

For this assignment, you will be using the Game Discussion forum. To use the Discussion forum, click on the link in the Discussion section of this website and then click the Register link in the upper right corner and fill out the registration form.

Part 1: Introduce yourself

1. Click on the Groups button in the main menu (above). Find your group # on the Groups page. Remember your group #.
2. Go to the Discussion forum and click on your group's forum under the "Groups" section.
3. Enter the group password that has been sent to you in an email message. If you have not received an email message (or deleted it), please email gamemaster@goforbroke.org.
4. Post a short bio about yourself. Feel free to comment on anyone else's bio.

Part 2: Create a group name

1. Discuss possible group names with your group in your group's private forum.
2. After you decide on a group name, have one member post the name to the "Assignment #1 - Group Name" forum.
3. Feel free to comment on other groups' postings


After you post your group name, you will receive further instructions on how to proceed.

SCORING:

- Assignment (10 points possible): Complete both parts of this assignment
- Discussion (10 points possible): Quantity and quality of group discussion posts (don't be afraid to post frequently!)
- Bonus (5 points possible): Complete the assignment on time

Please get started on creating your group name now.


This assignment is due by Tuesday, March 30, 2010. You can get started on your next assignment early if you finish before that date.



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Figure D7. Scenario – December 7, 1941



FINDING IDENTITY

AN ALTERNATE REALITY GAME ABOUT THE HISTORY OF JAPANESE AMERICANS DURING WORLD WAR II


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December 7, 1941

On Sunday, December 7, 1941, you are at home with the rest of the Takahashi family. Just before noon, you hear some people yelling outside and go out to investigate.

"Pearl Harbor has been bombed!"



One of the Takahashi boys yells at you to come inside the house, where you huddle around the family radio and listen to news reports of the Japanese attack on Pearl Harbor.

Your father, Mits Takahashi, later tells the family, "We must all be careful now. Even though we are U.S. citizens, people will think we are the enemy."


What will happen tomorrow? Will your friends and other people start to treat you differently?"

[Click here to learn how to proceed](#)

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Figure D8. Puzzle – December 7, 1941



FINDING IDENTITY

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December 7, 1941


In order to progress to the next scenario, your group will need to do as follows:

Each member of your group will be receiving an email with the Subject line "December 7, 1941." This email message will contain instructions for each person to find a unique word.

Enter the correct **word** into each of the textboxes below.

Click the "Done" button after you have entered in all four (4) words and/or phrases.

You must complete this task by Thursday, April 1, 2010. You can get started on the next assignment early if you finish before that date.




Word 1

Word 2

Word 3



Word 4



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Figure D9. Assignment #2 – December 7, 1941

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Assignment #2 - December 7, 1941

Congratulations on finding your next assignment!

Your group's assignment is to:

Create a **BLOG POSTING** that answers the following question:

"In the days following December 7, 1941, how has your life in Reedley, CA as a member of the Takahashi family changed?"

To create your blog post, create an account for your group on Wordpress (www.wordpress.com), Blogger (www.blogger.com), or any other blog site.

TIP #1: If more than one member will be accessing your blog account, you could use the same password as the one for your Group's private discussion forum in order to make it easy for everyone to remember.

TIP #2: Share any relevant resources that you came across during the word search puzzle with the rest of your group in order to provide them with ideas for your blog post.


After making your blog post, assign one person from your group to go to the Discussion Forum and post a link to your blog post in the "Assignment #2 - December 7, 1941" forum.

SCORING:

- Assignment (10 points possible): Quality and **creativity** of your blog posting
- Discussion (10 points possible): Quantity and quality of group discussion posts
- Bonus (5 points possible): Include a relevant video clip in your blog post (via link or embedding)

Please use **ONLY** the Discussion Forum to discuss ideas for your blog post among your group. You are encouraged to post comments on any of the other group's blog post. Your comments will contribute to the Discussion Forum score for your group.


This assignment is due by Saturday, April 3, 2010.



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Figure D10. Scenario – Executive Order 9066



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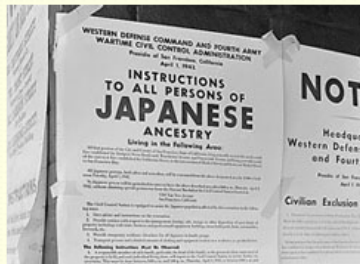





Executive Order 9066

On February 19, 1942, you hear on the radio that President Franklin D. Roosevelt has signed Executive Order 9066 that gives the military the right to ban any citizen from the West Coast area of the United States.

"What does this mean for us?" asked your 10-year old brother, Johnny Takahashi.

The answer would come a couple short months later in April 1942 when a notice titled, "Instructions to all persons of Japanese Ancestry" was tacked up all around the town.



You learn that your family now has less than a week to evacuate your home to be transported to an "assembly center." You can only take what you can physically carry.


"How will I be able to fit all of my stuff into a couple of suitcases?" you wonder.

[Click here to learn how to proceed](#)

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Figure D11. Puzzle – Executive Order 9066



FINDING IDENTITY

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Executive Order 9066


In order to progress to the next scenario, your group will need to do as follows:


Each member of your group will be receiving an email with the Subject line "Executive Order 9066." This email message will contain instructions for each person to locate three (3) individual letters of the following web address:

http://_ _ _ _ _ / _ _ _ _ _

(Hint: each person's letters are grouped together.)

Follow the web address to your assignment.






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Figure D12. Assignment #3 – Executive Order 9066



Assignment #3 - Executive Order 9066

Congratulations on finding your assignment!

Your group's new assignment is to:

Create a **WORD CLOUD** that describes your feelings about having to evacuate your home because of Executive Order 9066.

You can create your word cloud on any online site, such as [Wordle](#) or [Word It Out](#).

More information about word clouds is [available here](#).

After making your word cloud, please email a link to your word cloud to gamemaster@gqforbroke.org. The links will be posted in the "Assignment #3 - Executive Order 9066" forum after the Game Master receives the word cloud links from all the groups.


After the links are posted, you will have two days to make comments on the other groups' word clouds.


SCORING:

- Assignment (10 points possible): Quality of your word cloud
- Discussion (10 points possible): Quality of group discussion posts and comments on other groups' word clouds
- Bonus (5 points possible): You will be awarded bonus points based on the originality of your word cloud (i.e., unique - but relevant - words)

Please use **ONLY** the Discussion Forum to discuss ideas for your word cloud among your group.

This assignment is due by Sunday, April 11, 2010.






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Figure D13. Scenario – Japanese Americans in the Military



FINDING IDENTITY

AN ALTERNATE REALITY GAME ABOUT THE HISTORY OF JAPANESE AMERICANS DURING WORLD WAR II

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Japanese Americans in the Military

"You did what?!"

You rush into your family's barrack at the Poston Relocation Camp and see your parents confronting your 18-year old brother, George Takahashi.

You learn that George has volunteered to serve in the U.S. Army as part of the all-Japanese American 442nd Regimental Combat Team.



George leaves Poston a few weeks later amid much emotion from your family members. George writes a few weeks later saying that he is in a training camp in Mississippi.


A few months later, George writes to say that he is shipping off to the war front in Europe. You read the Poston Chronicle newspaper everyday to see if there is news about the war. At this time, your mother is very quiet and withdrawn. George is the *atotori*, the first-born son.

[Click here to learn how to proceed](#)

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Figure D14. Puzzle – Japanese Americans in the Military



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Japanese Americans in the Military

In order to progress through this scenario, **each group member** will need to do as follows:

You will be receiving an email containing a piece of a photograph and instructions on how to find the full-sized photograph from which the piece originated.

You must find the original photo, save a copy of it to your computer, then post it to your Group's private forum (create a new Topic for the photos).


Also, please include caption for each of your Group's photos.

When your group has all four photos and captions posted on your Group's private forum, if all four photos are all correct, you will receive an email with information about your next assignment.

If you get stuck and need a hint, send an email to gamemaster@goforbroke.org.

You must complete this assignment by Friday, April 16, 2010. You can start on your next assignment early if you finish before this date.


Good luck!



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Figure D15. Assignment #4 – Japanese Americans in the Military



FINDING IDENTITY

AN ALTERNATE REALITY GAME ABOUT THE HISTORY OF JAPANESE AMERICANS DURING WORLD WAR II

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Assignment #4 - Japanese Americans in the Military

Congratulations to your group on finding all four photographs!

Your group's new assignment is to:

Create a **VIDEO SLIDESHOW** about the significance of the Japanese American segregated military units in World War II.

Create your group's 60-second video slideshow using [Flixtime](#). Flixtime is a free, online video slideshow site that allows you to easily create video slideshows. For more information about Flixtime, [take a look at this article](#).

After making your video slideshow, please email a link to your video slideshow to gamemaster@gqforbroke.org. The links will be posted in the "Assignment #4 - Japanese Americans in the Military" forum after the Game Master receives the video slideshow links from all the groups.


After the links are posted, you will have two days to make comments on the other groups' video slideshows.

SCORING:

- Assignment (10 points possible): Quality of your video slideshow
- Discussion (10 points possible): Quantity and quality of group discussion posts and comments on other groups' video slideshows
- Bonus (5 points possible): Creativity and originality of your video slideshow

Please use **ONLY** the Discussion Forum to discuss ideas for your video slideshow among your group.


This assignment is due by Tuesday, April 20, 2010.



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Figure D16. Scenario – Resettlement



FINDING IDENTITY

AN ALTERNATE REALITY GAME ABOUT THE HISTORY OF JAPANESE AMERICANS DURING WORLD WAR II


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Resettlement

It's now early 1945. From what you've read in the news, the war appears to be going favorably for the U.S. and its allies. Your brother George was wounded fighting in Italy, but fortunately he is OK and will be returning home soon.

You learn that the government will be closing Poston by the end of the year. Your family starts to make plans to leave the camp. You help pack up all of your family's belongings and load up the truck.



Your father is talking about moving the family to some place where there may be more work opportunities, like maybe Los Angeles, San Francisco, or even to [Seabrook Farms in New Jersey](#).


Where will your family go? Will George and the older siblings stay with the family or venture out on their own? How will the Japanese Americans be received by the general public when they eventually resettle?

[Click here to learn how to proceed](#)

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Figure D17. Assignment #5 – Resettlement



FINDING IDENTITY

AN ALTERNATE REALITY GAME ABOUT THE HISTORY
OF JAPANESE AMERICANS DURING WORLD WAR II

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Assignment #5 - Resettlement

You have made it to your final assignment!

Your group's new assignment is to:

Create an **ONLINE COLLABORATIVE STORY** about what happens to the Takahashi family after leaving Poston.

Create your group's online collaborative story using an online collaborative writing tool, such as [Writeboard](#) (see [this article](#) for more information), [Google Docs](#), or even just your group's blog site.

To write your collaborative story, group members will take turns writing one-to-two sentence at a time (you will need to establish a writing order). **Each group member is required to write at least twice** (i.e., there should be at least two rounds of story writing).

Have fun with this assignment! Please be as creative as you like as long as you are historically accurate. Feel free to go more than two rounds if you so desire.

After making your collaborative story, please email a link to your collaborative story to gamemaster@goforbroke.org. The links will be posted in the "Assignment #5 - Resettlement" forum after the Game Master receives the collaborative story links from all the groups.


After the links are posted, you will be able to make comments on the other groups' collaborative story.

SCORING:

- Assignment (10 points possible): Quality of your collaborative story
- Discussion (10 points possible): Quantity and quality of group discussion posts and comments on other groups' collaborative stories
- Bonus (5 points possible): Creativity of your story

Please use **ONLY** the Discussion Forum to discuss ideas for your collaborative story among your group.


This assignment is due by Wednesday, April 28, 2010.



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Figure D18. Scenario – Finale




FINDING IDENTITY

AN ALTERNATE REALITY GAME ABOUT THE HISTORY OF JAPANESE AMERICANS DURING WORLD WAR II

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Finale

It is now today. You have finally woken up from your dream about living in the 1940s as a member of the Takahashi family. You wonder if anything from this dream will change the way you think about some things.



Congratulations on successfully completing this game! Hopefully, you have enjoyed your experience and have learned something about history (and yourself).


Thank you very much for playing!

If you have any additional comments or feedback on the game, please email gamemaster@goforbroke.org.

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Figure D19. Example Result: Assignment #2 – Blog Post



My Story in Letters follows the lives of Jane Takahashi (California) and Sue Isonaga (Hawaii) after the December 7th attack on Pearl Harbor.

author's note

We find this approach fascinating. Telling stories and teaching history through a correspondence between two cousins, one located in CA and one in HI. Through their eyes, readers see the different events unfolding but we also have a window into their thoughts, emotions and reactions. Even more fascinating is that while Jane is a fictional character (who we are using historical research and other sources to fill in information), Sue is a real person. We will be utilizing the information on the HI Nisei Story (and perhaps from Sue herself!) for her letters.

Resources

MY STORY IN LETTERS

Letter 02: Jane to Sue

April 4, 2010 at 8:19 pm (Jane Letter)

January 1, 1942

Dear Sue,

Things are not very happy here but I will go ahead and wish you a Happy New Year anyway. Mama said that is the year of the Horse, not very auspicious especially for us girls so let's keep our fingers crossed that things will be better this year than they have been in the past month.

I was going to wait to hear from you but it seems like there is not a lot of mail going from here to there. Papa said that the US Government does not want to have a lot of ships going out to sea and I am sure they do not want anything going out to anyone with a Japanese name. Maybe I should change my name to Jane Thomas and you can be Sue Isenberg so things can get out?

Why I think we will not have a happy new year is that we were not able to go to the Reedley Buddhist Church like we do every year for our oshogatsu blessing, ozoni and good luck soba. Guess why? The day after I wrote my letter to you, the FBI came in and arrested all of the priests and the Sunday School teachers. Not just the ones from Japan but also the Nisei ones. They even took poor old Mr. Kitaoka, the chorus leader, who is 98 years old and walks with a cane. When Mr. Kitaoka's son asked why they had to take him, the FBI said he was suspected of teaching subversive music. They said they suspected that our songs were signals to the enemy, telling them when to attack. Mr. Kitaoka's son said that the songs were about the seasons since we live in a farm town but they said that he was lying. They said that Haru Ga Kita (Spring is Coming) was telling the Japanese Navy that it was safe to return to America in the spring and that Konnichawa Akachan (Hello Baby) was encouraging the enemy to send more military here!

After that day, everyone felt it was safer just to close the Church than to keep it open. Plus, there was nobody who could conduct the service with all of the priests away. The saddest thing is, we don't even know where they are and haven't heard from them.

Everybody is so scared now. We found out they also took away the heads of the Japanese Farmers and Merchant Association, the kendo club instructors, anyone in town who was the President or head of any type of organization that we belonged to. They even took away our math teacher at Reedley High School because he was kibeil.

Mama asked Papa if he would be taken away too but Papa said he is just a farmer so we didn't need to worry. But guess what? One day three FBI men came to our house and told Papa they wanted to search through our belongings. They said that someone at the hardware store told them Papa had recently purchased some gunpowder. Two men went out with Papa and the other man started to go through our belongings. That man was terrible, he did not have any respect for us or our things. He would dig through drawers and cabinets, putting anything that had Japanese language or looked Japanese in a bag "for evidence", he explained. Mama was almost hysterical so Jiichan told me to take her, Baachan and the kids and stay in the bathroom. I could hear George shouting, "Hey's that's our radio! Don't break that doll! That's Mama's favorite cup!" and Jiichan telling him, "Shikata ga nai, Jyoji-kun".

I looked out the bathroom window and saw Papa leading the other two FBI men to the barn. I saw him take out the gunpowder and heard him explain that every farmer in Reedley used explosives to remove dead tree trunks that couldn't be cut with axes or dug out. One of the men called Papa a "sneaky Jap" and hit Papa with the bag of gunpowder. Before Papa could stand up, the two men pulled out guns and pointed it at him. "Stay on the ground Jap," said one, "You make one move you're dead!" My stomach hurt and I couldn't look anymore after that.

We could hear the footsteps of the men and Papa walking back into the house and George saying, "Where are you taking him? Where is he going? He's American!" The FBI man in the house then pointed a gun at George. Mama ran out of the bathroom and I peeked out to see what was going on in our living room. I saw Mama on her hands and knees bowing to the FBI men saying, "Please don't take him away, please." The men didn't even listen to her and Papa said, "Chotto dake, chotto sake. Daijoubu". It was then I saw that Papa was in handcuffs and one of the FBI men had a gun to his back.

Figure D21. Example Result: Assignment #4 – Video Slideshow

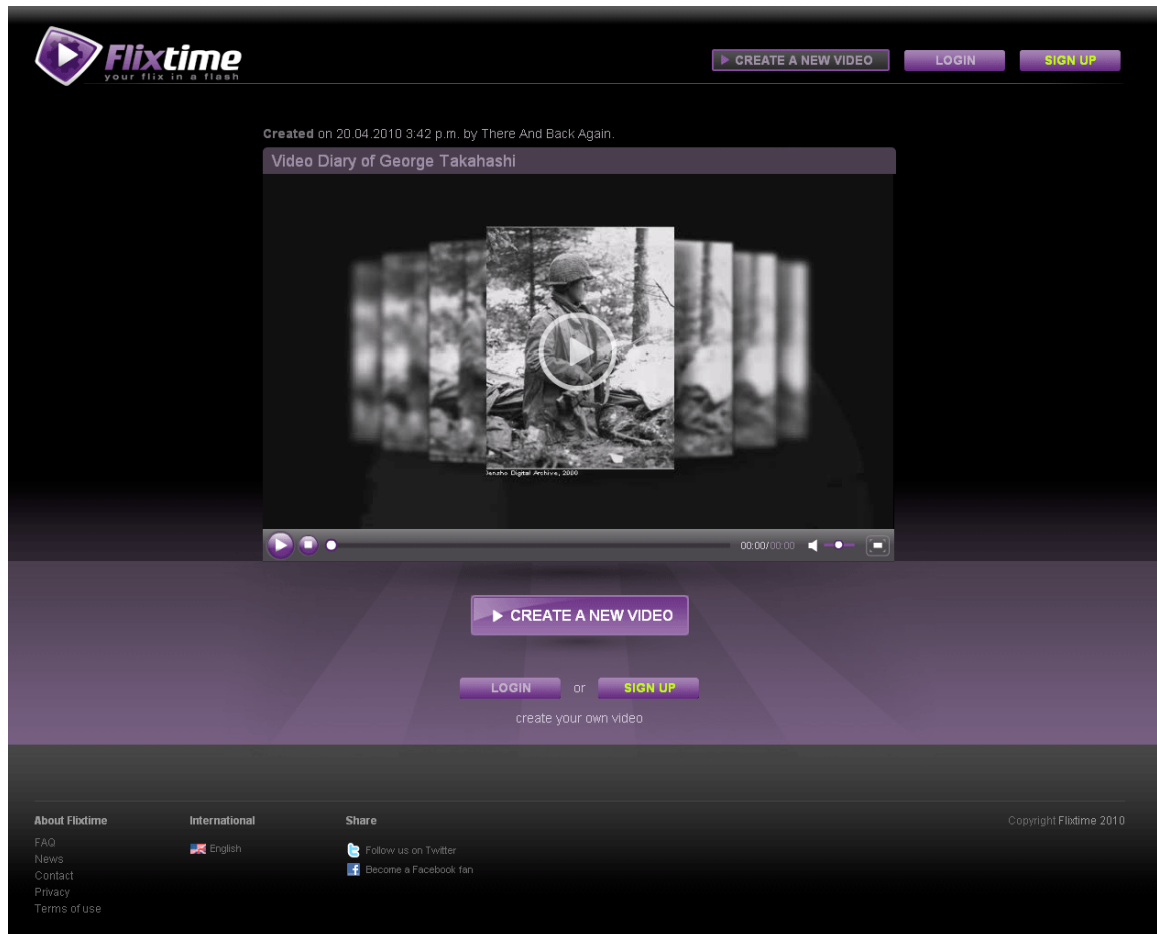


Figure D22. Discussion Forums

FINDING IDENTITY

[Forum Home](#)

[New Posts](#)
[Un-Answered Topics](#)

[FAQ](#)
[Search](#)
[Register](#)
[Login](#)

The time now is 4:42pm
You last visited **Today** at 3:41pm

Quick Login

Forum	Topics	Posts	Last Post
General			
Game Announcements Announcements from the Game Master	5	38	Assignment #4 Comments By jayne ▶ 22 Apr 2010 at 7:25pm
Open Forum Open discussion about the game	25	333	Avocado & Baachan By Pkicks ▶ 04 May 2010 at 11:04pm
Scoring Some details and comments about the game scores	3	42	Assignment #3 By Teri ▶ 19 Apr 2010 at 4:49pm

Forum	Topics	Posts	Last Post
Groups			
Randy's Guineas Private group forum for Randy's Guineas	19	395	03 May 2010 at 6:22pm
Goro's Gang Private group forum for Goro's Gang	20	633	02 May 2010 at 8:36pm
Poston is Postin' Private group forum for Poston is Postin'	15	418	28 Apr 2010 at 11:06pm
There And Back Again Private group forum for There And Back Again	18	292	29 Apr 2010 at 7:01am

Forum	Topics	Posts	Last Post
Assignments			
Assignment #1 - Group Name Group name submissions	2	9	Group Name Submissions By Shari ▶ 31 Mar 2010 at 9:16pm
Assignment #2 - December 7, 1941 Blog post links and discussion	6	92	Obaachan's Garden:... By Lisa ▶ 08 Apr 2010 at 2:48am
Assignment #3 - Executive Order 9066 Word cloud links and discussion	6	61	Word Clouds - General Comments... By jayne ▶ 18 Apr 2010 at 1:49pm
Assignment #4 - Japanese Americans in the Military Video slideshow links and discussion	5	125	Video Slideshow - Goro's... By Pkicks ▶ 29 Apr 2010 at 8:05pm
Assignment #5 - Resettlement Collaborative story links and discussion	5	62	Collaborative Story - Poston... By jayne ▶ 04 May 2010 at 2:47am

What's Going On?

Forum Statistics

Our users have posted 2,500 Posts in 129 Topics in 12 Forum(s)
Last Post; 04 May 2010 at 11:04pm By [Pkicks](#)
We have 21 Forum Members
The Newest Forum Member is [Kurt](#)

Active Users

In total there are 1 [Active Users](#) online, 1 Guest(s), 0 Member(s), 0 Anonymous Member(s)

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