

# A GAME-BASED MULTIMEDIA APPROACH TO LIBRARY ORIENTATION

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## OVERVIEW OF PROJECT

The Library Instruction Office at The Ohio State University, in collaboration with the Office of First Year Experience and the Office of Undergraduate Studies, has developed an online game to orient all new first year students to the University Libraries prior to their arrival on campus. Through an interactive campus map, eight casual games, and five short videos, new students can become familiar with (and hopefully more willing to use) library locations, collections, services, tools, and people in the vast Ohio State library system.

An online survey was administered to a sample of new freshmen in October 2006 to gather information about their initial perceptions regarding the University Libraries. The same survey will be given in October 2007 to new students who have been exposed to the orientation game. Comparing data from the two surveys will help to assess impact of the orientation game on new student perceptions of the Libraries.

## Background

Each autumn, over 6,000 new freshmen enroll at The Ohio State University. During the summer, these students and their families participate in on-campus orientation sessions offered by the Office of First Year Experience (FYE).

In January 2006, an Ohio State vice-provost contacted the Libraries' Instruction Office to discuss an important proposal from the University administration. The vice provost requested the Libraries' Instruction Office meet with FYE and the Office of Undergraduate Studies to develop an orientation product that could be offered to all new students before their arrival on campus for their first classes.

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## Goals

Initial meetings between Instruction Office librarians and FYE clarified project goals. The product would be an entertaining orientation tool of information-seeking activities to introduce students to the Ohio State University Libraries. Non-threatening activities would help students understand the research tools and services available as well as remove some of the intimidating aura surrounding the huge library system on the Columbus campus.

This new product would be distributed to incoming freshmen in late summer, a time that new students are most receptive to learning about the university. Ideally, this new tool would appeal to student and family members alike. FYE has noted that "helicopter" parents, who hover around students during orientation, want to learn everything about the environment their child will be experiencing. By involving families in this library orientation product, FYE and the Instruction Office hope that these adults will encourage their child to work on the orientation activities, learn about the University Libraries themselves, and better relate to their student's future research work.

## The Design Team

Three instruction librarians, along with a part-time graduate student with expertise in programming and assessment, formed the initial project design team. Meetings were held weekly to discuss the project, technology, programming needs, usability testing, and timelines.

The design team worked toward a launch date of summer 2007. An orientation product to be given to 6,000 students, they reasoned, must contain quality information in an entertaining presentation, meet the needs of students and librarians alike, be thoroughly tested for usability, and be robust enough to survive interaction with users with varying computer skills. All this would take time.

The one year deadline included enough time to:

- Survey students about their orientation needs and preferences
- Search the literature and investigate similar orientation projects
- Determine the format for the information
- Explore different content and delivery methods (Web vs. CD)
- Discuss issues with on- and off-campus experts
- Conduct usability tests throughout the development process
- Assess the impact of the product on student perceptions.

## Funding

Costs for the initial implementation included purchase of multimedia software, survey costs, and wages for the part-time graduate assistant and also a short-term undergraduate student programmer. The Director of Libraries has funded the entire development.

## Student Libraries Perceptions

The design team created a survey for first quarter students regarding their knowledge and use of the Libraries during their first weeks at the University. The survey requested feedback on whether new students:

- Received an introduction to the Libraries at Ohio State
- Visited a campus library
- Used any library resources
- Had confidence or fears about using the libraries

Other questions clarified instruction sessions participated in, specific libraries visited, resources used, and personal perceptions of the Libraries. Students also described what else they wanted to learn about the Libraries and whether a library orientation CD would interest them.

Working with FYE, the design team identified a stratified random sample of 500 new students representing all 12 Ohio State colleges. FYE contacted these students via email with an explanatory note about the survey and its Web site address. Movie tickets were offered to encourage participation.

## SurveyData

The perceptions survey ([www.zoomerang.com/recipient/survey-intro.zgi?p=WEB225Q2WCSVTN](http://www.zoomerang.com/recipient/survey-intro.zgi?p=WEB225Q2WCSVTN)) was open to the sample audience of 500 first year students during the fourth through sixth weeks of classes in 2006. About 29% (147 students) of this sample audience completed the survey.

Data showed that 29% (43 students) of those who responded to the survey had already received an introduction to the Libraries through an in-class presentation by a librarian, the online survey assignment, the Libraries' for-credit classes, library workshop, *net.TUTOR* tutorials, or a library tour. Over

60% of the students had visited a library.

They agreed that they don't know what library resources are available at OSU and have difficulty finding what they need. Students wanted to learn more about library locations, which are closest to their dorm, resources relevant to their research, accessing information online, and quiet study spots.

A large number of students felt an orientation CD should include short movies about various aspects of the Libraries. Other suggestions requested digital stories about research, interactive games and quizzes, and instruction on how to use resources. However, it should be noted, a number of students indicated they would not use such an orientation CD.

## CONTENT DECISIONS

### Initial Plan

As a starting point for the orientation project, the development team defined a goal: to provide basic information about the OSU Libraries in an engaging format, in order to inspire students to use a large, confusing system that offers a wealth of resources. Initial objectives focused on encouraging students to:

- Discover the diversity of the library system.
- Experiment with library catalogs.
- Compare Google with a library database.
- Include library research in their academic repertoire.

To achieve these objectives, the team planned a discovery-based interactive game, where students would explore a medieval-themed environment, learn from characters, and perform various tasks. The team projected that students would use an avatar to move about the game landscape and complete four interactive quests in order to qualify for the final "Trial of Knighthood," a summary quiz. Projected quests/tasks were:

- Slay the Google Dragon (use advanced search features in Google, Google Scholar).
- Breech the Book Fortress (use the catalog to find books).
- Beseech the Articles Wizard (use a database to find articles).
- Conquer the Library Maze (identify library locations, collections).

### Revised Plan

After development of several prototype quests, the team revised its strategy for the project significantly. Although the basic goal remained the same, the focus narrowed to more traditional orientation objectives -- learning about the Libraries physical environment, available resources and services.

This shift in focus was motivated by several factors. First, insights from the freshman survey, described earlier, helped the team to understand what students most wanted to know at

this stage of their campus experience. Second, consultation with an Ohio State faculty member who does gaming research was pivotal. He felt the existing project was more like a tutorial than a game and suggested tying the theme to the campus environment in order to make it more relevant and engaging. He noted that users should have the ability to make more choices.

Third, on reflection, the team recognized that the project closely resembled the “Make the Leap” online library assignment completed by new OSU students - anything that seemed like work or instruction would not be attractive to students. Fourth, an OSU theme would be more engaging for users than the medieval theme. Also, the team’s faculty consultant convincingly asserted that community-building (affiliation with dorms, colleges) would also be a key element to get students to use it. Finally, the team recognized that construction of a high quality interactive game with animated characters and avatars was not achievable within the constraints of the timeframe, staff, or budget. The faculty consultant also advised the team to avoid making the project look too “gamey.” Real gamers would be disdainful, while female and novice gamers might be turned off to that style of play and possibly the Libraries as well.

After considering all these factors, the development team decided to focus on creating a basic orientation to the Libraries, similar to what might be provided on a tour, using short, casual games (puzzles, matching, etc.) revolving around library locations, procedures, and services. Players would employ a more game-like “trial and error” approach, rather than an “instruct and practice” methodology. There are no penalties for wrong guesses. The entire process should take no more than 30 minutes to complete. Individual prizes will be available to those who solve the puzzle. The team intends to encourage group affiliation by offering a collective reward, such as a trophy, for most participation by dorm or college of enrollment.

## THE GAME

“Head Hunt: The Game”, presents students with a dilemma, which is described in text on the top level of the game. Some mischievous Michigan fans have stolen Brutus Buckeye’s (the OSU mascot) head. It’s hidden in a library on campus and players gain clues to its whereabouts through a virtual scavenger hunt in various campus libraries. Each clue is a letter, and when all are found, the player can unscramble the letters to discover the hiding location, win the game and qualify for prizes. After running a system check to be sure they have all the appropriate browser settings and plugins, they start.

The top-level game board is a campus map, with an unmarked, clickable balloon on each library location. By clicking on a location, the player will see a picture of the library, a brief description of its interesting features, and may have an option to play a game or watch a movie. A couple of locations have no game or movie. There are 5 movies and 8 games hidden in various locations. Completing or crossing a threshold in a game earns the player a clue. Movies are supplementary activities.

## Movies

All movies have been converted from their original format and are being delivered as flv (Flash Video) files. This allows a streaming effect for quicker viewing and the video does not need to be downloaded to the user’s computer.

*Renovation Slideshow:* OSU’s Thompson (Main) Library is currently closed and undergoing renovation. This slideshow tells students the reasons for the renovation and what the new building will look like. It was originally created in PowerPoint.

*Cartoon Research Library Story:* In this digital story, an archivist tells how the San Francisco Collection came to be and how it came to OSU (in 6 tractor trailers!). Her interest in working with this collection as a way of passing on important history to future generations is highlighted.

*Libstories:* Students filmed in a story booth during a recent welcome week tell inspirational and practical stories of how the OSU libraries have been meaningful and helpful to them.

*Director’s Welcome:* The OSU Library director welcomes students to the OSU libraries, encouraging them to come for study, research, leisure reading/viewing, or computers.

*Sullivant Learning Commons:* A Peer Library Tutor (PLT) tells her fellow students about the technology and assistance available in the Sullivant Library’s new learning commons.

## Games

*Libwords:* A crossword puzzle helps students “come to terms with terms” used in the OSU Libraries. Pictorial hints are offered for the clueless.

*Way/No Way:* Offers a series of True (Way!) and False (No Way!) questions about OSU and lets players take a stab at guessing answers about the Libraries collections and services.

*Clickzone:* Players view the Libraries’ Web site and click on the correct links to demonstrate they can figure out where to search for a book, where to renew items, where to find articles, etc.

*Library Superstars:* Matching game with pictures of famous (and not so famous) library folks and descriptions of their contributions to the University Libraries past and present. Pictures range from the current football coach who chairs our renovation fundraising drive to John Glenn whose archives we hold.

*Multiple Guess:* Players face a series of multiple choice questions relating to the Libraries’ circulation benefits, services, and policies. No problem if the player guesses wrong; they can just keep trying until at least 10 have been answered correctly.

*Database Match:* Drag and Drop matching game where players connect a database title to its description. Even if players

have never heard of these titles before, the descriptions offer clues to the likely title.

*Close to Dorms*: A jigsaw puzzle that, when put together, reveals a OSU Columbus campus map showing which libraries are closest to a student's specific dorm cluster.

*LC Call number order*: This game gives practice understanding Library of Congress call numbers by requiring players drag and drop books onto a shelf in correct order.

## PRODUCTION CHALLENGES

### Format

Which format (Web or CD) should be employed? The CD format might generate interest by parents/students when it arrives in the mail and would be accessible to everyone who had a computer and eliminate any concerns about those who do not have a fast Internet connection at home. Ultimately though, feedback from usability testers convinced the designers that CDs would probably not be opened or used by most students. CD production costs could be channeled to pay for incentives instead. The current project is entirely Web-based, using JavaScript, PHP, and a MySQL database backend. Software development tools are:

- Google Map API: to build the interactive game board.
- Hot Potatoes (freeware): to develop casual game prototypes for testing.
- Captivate/Flash: to create several games/movies.

### Incentives

Is a simple treasure hunt motif strong enough motivation for users to utilize all of the casual games? The team felt that some storyline was needed to encourage students to sample all games. Added incentive would be provided by the chance to qualify for individual prize drawings and also a dorm or college related trophy.

### Usability testing

What can the team learn from students before game development progresses too far? A graduate assistant identified a small group of students for usability testing on the early prototypes of games. She asked them whether the games made sense, were interesting, how they wanted to receive help (avatar, pop-up windows, etc.), their format preference (Web site or CD), and their suggestions for layout, content and navigation.

Data from usability testers helped to enhance the interface. For example, a bar was created for the top of all game screens to display buttons for "Help," "Exit to Map," "Mute Audio" and others as needed. Additionally, all games also have an introductory screen with instructions and any time limits

imposed. The team also standardized the videos, so that users will not need to have multiple players installed.

### User tracking

What can be done if a student does not have time to finish all games and stops part way through? One solution is for clues to appear on the map screen as users complete games. A database stores progress for users who have authorized and can restore their clues on subsequent login. A SUBMIT ANSWER button will appear after at least four casual games have been completed. By submitting a correct answer, players will qualify for a prize drawing. The database will also provide important data on usage of components.

### Project evaluation

What is the best way to capture evaluation data? The SUBMIT ANSWER button will provide space for users to unscramble letter clues and provide an answer to the puzzle. If that answer is correct, a link to the project evaluation will appear. If incorrect, the user may return to the game to get more clues and submit again later. The evaluation form will also be available as a continuous link from the main (map) page, so that guests can also provide input.

## IS THIS INSTRUCTION?

"Head Hunt" is an orientation game. The use of OSU's campus map and library locations is a device to make students aware of the number of libraries and their varied locations on campus. The purpose is not to instill deep learning, but to provide awareness and help students develop a positive attitude toward the libraries. First quarter freshmen will not likely require the use of specialized databases, high-level reference assistance, or unique collections. They should know such things exist, and that there are resources and services that can address their current needs, such as study space, excellent document delivery, and good technology. The library can meet them where they are and continue to deliver as their needs grow and develop.

Students learn these concepts through trial and error; through visual, audio, and textual information; they control how much they learn (some games allow them to continue playing after they've earned a clue, some allow them to view extra information, and movies are completely optional); and even wrong answers serve to educate. Learning is discovery-based.

Is this everything a student needs to know about the library? No. Is this the appropriate method to teach every skill they need? No, but this information will serve entering freshmen well, and is a richer (and more memorable) learning experience than a brochure pocketed into a very full orientation packet.

# APPENDIX

## Ohio State University Libraries: FYE Orientation Game

