Action Research Project

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Faculty Learning Outcome #1

Develop a scavenger hunt to improve students' abilities to access the library's resources.

Essential Competencies and Indicators Addressed:

1. Assessment
   - Give timely feedback on class activities, exams and papers
   - Employ formative feedback to assess the effectiveness of teaching, counseling, and librarianship practices

2. Inclusion and Diversity
   - Develop reciprocity and cooperation among students
   - Vary assessment measures and techniques to engage cognitive diversity

3. Learning Centered Teaching Strategies
   - Employ methods that motivate students to learn
   - Use cooperative/collaborative learning strategies

4. Outcomes Based Practice
   - Align learning opportunities and assessments of course learning outcomes and program learning outcomes with the student core competencies
   - Construct measureable learning outcomes

5. Scholarship of Teaching and Learning
   - Produce professional work (action research or traditional research) that meets the Valencia Standards of Scholarship
   - Build upon the work of others (consult experts, peers, self, students)
   - Be open to constructive critique (by both peers and students)
   - Make work public to college and broader audiences
   - Demonstrate relationship of SoTL to improved teaching and learning processes
   - Demonstrate current teaching and learning theory & practice

Clear Goals

A. Abstract

The purpose of this Action Research Project is to determine if a scavenger hunt will improve students' abilities to access the East Campus Library's resources. The Information Relay, an activity adapted from North Carolina State University Library's Mobile Scavenger Hunt, strives to give students a venue where they can improve their abilities regarding the library. The Information Relay engages students in critical thinking and teamwork while they use iPads to explore the library.

When students come into the classroom, they are divided into teams and issued a clue packet which consists of an iPad, clue sheet, map of the library, and directions for answer submittals. The librarian gives a brief presentation about the library and a demo of the *Evernote* application.

Teams have thirty minutes to complete the Information Relay. The librarian stays in the classroom and monitors the teams' answers through *Evernote*. As the activity unfolds, the librarian copies the answers and pastes them into a PowerPoint presentation. When groups report back to the classroom, the librarian reviews the answers and photograph submissions.

Three sections of the Student Life Skills course participated in this project. 14 teams were each given 10 questions. These teams submitted a combined total of 97 correct answers and 3 incorrect answers. There were 40 none submissions. A total of 68 students took the pre and post surveys which provided data that the Information Relay increased students' abilities to access the library's resources.

B. Research Question

Will a scavenger hunt improve students' abilities to access the library's resources?

Adequate Preparation

Background from Multiple Perspectives

1. Student Perspective

"Can you help me find [insert any variety of library resources]?" I often receive this question from students when I am at the reference desk or out on the library floor. Much to my chagrin, a few of these students have previously taken one of my library instruction classes. Hence, I have already spent seventy-five minutes teaching them how to answer this very question—or so I thought.

I decided to approach these resource-access queries from the perspective of students. When students visit the library for an orientation, the instruction is largely limited to the classroom where they spend most of their time seated in front of a computer. During class, they are able to follow along with me as I navigate through the library's catalog, databases, and other pertinent resources. Occasionally, at the request of the professor, I give students a tour of the library which lasts approximately five to ten minutes. While these educational excursions are enough for some students, the recurrence of resource-access queries from students who have taken a library instruction class indicates that additional learning opportunities may be warranted.

The Information Relay offers a promising solution by extending library instruction beyond the classroom and into the main library setting. This hands-on activity immerses students into scenarios that are designed to give them practice with accessing library resources and materials. I believe that creating a guided, instructional environment where students practice skills, such as searching the catalog and using call numbers, will make them more capable and confident when they have to perform these functions on their own.

2. Colleague Perspective

Fellow librarians have commented that the Information Relay has the potential to be a valuable classroom tool. My colleagues anticipate that this activity will assist in bridging the gap between students and the library's resources because it replicates various situations students will encounter as they try to satisfy their information needs. Moreover, the librarians think the Information Relay can be used as a tool to quickly pinpoint research areas where students may need further clarification and practice.

A few librarians have expressed concerns about scalability. I designed the

Information Relay to operate within a seventy-five minute class. In order to offer the same service to all of our students, the librarians have asked me to consider how I would conduct the activity for a fifty-minute class.

Student Life Skills instructors also gave input into the design of the project. One suggestion was to keep the teams small. They felt this would give each student an active role in helping their team complete the tasks. Instructors thought larger groups would make some students uncomfortable with voicing their opinions and not giving each student enough to contribute. Therefore, the recommendation was to limit teams to 3 students.

Also, instructors suggested the clue questions should relate to topics relevant to the given class. For example, Student Life Skills classes would receive clue questions relating to college success and career goals. Streamlining the questions in this manner would place the library's collection and services into a more practical context for their students.

3. Expert Perspective

Utilizing Games for Instructional Purposes
The utilization of games is a popular option to engage students and assess learning in the classroom setting. Games serve as motivators and bestow a spirit of competition (Wortham 2263). As students immerse themselves into the game environment, learning infuses itself with the play. Furthermore, games are important catalysts for increasing student participation. As Suja'ee and Khine noted, "Students are more likely to be motivated to take part for it allows learning to take place in a participatory framework and affords them ownership of their design and creation" (378).

The technological aspects of the Information Relay may prove especially beneficial in helping educators connect with students from the Millennial generation. These students, who Sweeney categorized as being born between 1979 and 1994 (165), are digital natives because they have always lived with the existence of the Internet (170). Growing up in the Internet Age where they can sign in to *Facebook* or send text messages on their cellphones, members of the Millennial generation are natural collaborators (171). Furthermore, gaming is prevalent among this age group and has shaped how they see the world in wanting instant feedback and interactivity (170).

In addition to increasing student engagement, games create opportunities to assess and build upon student learning. Smale explained that "competencies that are difficult to measure with traditional assessments, such as problem-solving, critical thinking, and inquiry skills, may be evaluated by observing student actions within the context of gameplay" ("Learning through quests" 39). For librarians who must work within the limitations of a single one-shot library

session, games are efficient and quick tools for gauging impact on student learning.

As a result, many academic libraries have adapted games into their information literacy curricula. Sweeney argued, "Gaming gives quick feedback and requires a lot of analytical thinking. Many of these gaming behaviors can be converted into skills for searching, discovering, and gaining knowledge, the essence of libraries" (170). Examples of game incorporation includes New York City College of Technology's library which offers a game called Quality Counts that helps students evaluate websites (Smale, "Get in the game" 129). Also, North Carolina State University Libraries created an award winning mobile scavenger hunt as a new take on traditional library orientations (*NCSU Libraries*). Adaptations of classic games in the vein of Pictionary (Wortham 2260) and Jeopardy! (Ackermann, Benjes-Small, and Vassady 87) are also common.

Even with documented benefits, using games for instructional delivery still has its critics and challenges. In exploring some of the obstacles, Smale found that staff skills, costs, and lack of time were contributing factors ("Learning through quests" 46-47). Furthermore, many in academia see games as leisure activities and, therefore, a distraction from more traditional practices (Smale, "Learning through quests" 37). McCain, who investigated why scavenger hunts had such bad reputations in certain library circles, suggests that design may be the issue (22-23).

Therefore, it is important to consider learning objectives and applications for games given to students. In addition, since information literacy is such an essential part of students' academic and personal lives, it is important for library classroom games to give students the opportunity to exercise their problem solving skills in a real-world context. As a consequence, students will see how the skills and knowledge obtained in class are applicable to their everyday lives (Suja'ee and Khine 374). Smale's adherence to this principle resulted in positive student feedback regarding their perceptions on demonstrating the information literacy skills being addressed ("Get in the game" 139).

Assessment Method
The pre and post surveys for the scavenger hunt give students the opportunity to report their abilities in regards to accessing the library's resources. Valencia's essential competency for assessment states, "Valencia educators will…promote students' abilities to self-assess" (Teaching/Learning Academy). The self-reporting nature of the surveys provides an intimate view into the progression of student's abilities as a result of their participation in the scavenger hunt. According to Schunk, "as students work on tasks, they derive information about how well they are learning" (214).

Academic self-efficacy, the belief in one's ability to complete a specific task, is used as the framework of my surveys (Ferla, Valcke, and Cai 499). In the

pioneering book *Self-Efficacy: the Exercise of Control*, Bandura discusses how "enactive experience," such as the information literacy scenarios featured in my scavenger hunt, correlates to skill mastery (80). Numerous studies (including Chemers et al.; Loo and Choy; Pintrich and de Groot; Multon, Brown, and Lent) highlight the profound representative value of self-efficacy on eventual academic performance. Moreover, research, such as the findings included in Kurbanoglu's "Self-efficacy: a Concept Closely Linked to Information Literacy and Lifelong Learning," demonstrates the interconnectedness of self-efficacy with the outcome of improved student ability that I hope to prove through this Action Research Project.

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<u>Teaching/Learning Academy Classes and Professional Development Seminars</u>:
ASMT 2121   Assessment as a Tool for Learning
INDV 2151   Inclusion and Diversity
LCTS 2111   Learning Centered Teaching Strategies
LOBP 2131   Learning Outcomes-based Practice
SOTL 2272   Developing Effective Surveys
SOTL 2910   Destination 2013
LCTS 2212   Engaging Lectures
PRFC 2910   Portfolio Planning Workshop

SOTL 2274   ARP Data Planning Tutorial

4. Self Perspective

In Fall 2012, Student Life Skills instructors, Tara Rains and Anna Saintil, approached me about expanding my library orientation to include a scavenger hunt. They felt that the library could be an overwhelming place to visit for their students, many of whom are infrequent library users. In addition, Tara and Anna requested I add a game component to the instruction because they felt students would relax and be more engaged. As the librarian liaison to the Student Life Skills Division, I was eager to investigate how I could meet their request.

My review of the literature and consultations with colleagues and students validated the advantages of using scavenger hunts for instructional purposes. Games such as scavenger hunts allow for active learning and participation while, at the same time, helping to place learning into a meaningful context that makes an imprint on student knowledge. I was particularly keen on scavenger hunts because they require participants to find information, which is what students have to do in the library.

For my scavenger hunt, I wanted to create guided questions that provided students with the opportunity to access the library's resources and services. In addition, I thought having students submit their answers in the form of photos would increase their enjoyment of the activity. This led to the incorporation of the library's iPad collection into the scavenger hunt. In researching possible ways to present these varying elements, I came across North Carolina State University Library's (NCSU) Mobile Scavenger Hunt. NCSU used the *Evernote* App on iPod touches to conduct a scavenger hunt in which students submitted photo and text answers. I decided to adapt this scavenger hunt for East Library.

Appropriate Methods – Methods & Assessment Plan

A. Methods

1. Student Learning Outcome

- Students will be able to access library material.
- Students will be able to access library services.

2. Performance Indictors of Student Learning Outcomes

- Students will be able to perform search in the catalog.

- Students will be able to use the library catalog to identify item call numbers.
- Students will be able to locate material based on call number.
- Students will know the difference between a reference and circulation item.
- Students will be able to locate group study rooms.
- Students will be able to locate research guides.
- Students will be able to identify services offered by the Reference and Circulation departments.
- Students will be able to locate copy card machines.
- Students will be able to locate book displays.

3. Teaching Strategies of Student Learning Outcomes

Step 1: Determine learning outcomes and performance indicators for the scavenger hunt.

Step 2: Create team clue packets.

a. Clue sheets with questions in random order for each team. (FLO1Aritact1A)

b. Consult instructor about specific library material for students to find.

c. Map of the library and photos of pertinent departments. (FLO 1 Artifact 1B)

d. Instructions for submitting answers through the *Evernote* app. (FLO 1 Artifact 1C)

Step 3: Create a PowerPoint presentation about the library. (FLO 1 Artifact 2)

Step 4: Create a review PowerPoint to be shown at the end of class. (FLO 1 Artifact 3)

Step 5: Register team names with evernote.com.

a. Create a notebook in each team account for the scavenger hunt.

b. Send an invitation from each team account for me to join the notebook.

Step 6: Create the pre and post surveys from the performance indicators.

Step 7: Ensure the items that students need to complete the activity are in their correct locations.

Step 8: Checkout iPads from Circulation.

Step 9: Arrange classroom for the teams by putting the clue packets at the end of each row.

Step 10: Divide students into teams as they enter the classroom.

Step 11: Formative Assessment - Give students the pre-survey. ([FLO 1 Artifact 4](#))

Step 12: Ask students to fill out the photo-release form. ([FLO 1 Artifact 5](#))

Step 13: Give the PowerPoint Presentation about the library and the scavenger hunt.

Step 14: Teams pick their roles: model, iPad operator, and clue reader.

Step 15: Hand iPads to the iPad operators.

Step 16: Demonstrate how to submit an answer using the *Evernote* app on the iPad.

Step 17: Write the time on the board, tell teams they have 30 minutes, and they can now begin the scavenger hunt.

Step 18: Open *Evernote*'s desktop application to monitor team progress.

Step 19: Summative Assessment - As teams answer the questions, transfer their photo and text submissions to the review PowerPoint.

Step 20: Formative Assessment - When teams return to the classroom, give the post survey. ([FLO 1 Artifact 6](#))

Step 21: Go over the review PowerPoint. ([FLO 1 Artifact 7](#))

   a. The question and the answers should be on separate slides.

   b. Ask teams about their strategies for answering the questions then show the photo and text answers.

Step 22: Analyze class artifacts, pre and post surveys, and student and instructor feedback to assess the activity.

B. Assessment Strategies

Pre and Post Survey
I administered a five question pre-survey about accessing the library's resources. After the activity, I gave students the same set of questions in order to measure the

impact of the Information Relay on their abilities. The surveys served to enrich the data provided by the scavenger hunt results and to reinforce the student learning outcomes for the class.

The survey, which was adapted from a template in Hernon and Dugan's *An Action Plan for Outcomes Assessment in Your Library*, presented students with a series of statements (151). Each statement related to various facets of accessing resources in the library such as identifying call numbers and searching the catalog. Students were instructed to indicate how true a statement was to them on a scale from 1 to 10 with 1 representing the least true and 10 representing the most true. Therefore, the lower the scale rating, the less the student knew how to use a specific skill, whereas the higher the scale rating, the more the student knew how to use a specific skill.

After consulting Data Consultant Sidra Van De Car, I divided the scale numbers into the following four categories:

Category	Scale Number Range
Least True	1
Somewhat True	2-3
Mostly True	6-9
Most True	10

Source Cited:
Hernon, Peter and Robert E. Dugan. *An Action Plan for Outcomes Assessment in Your*

Library. Chicago and London: American Library Association, 2002. Print.

Information Relay
The Information Relay consisted of 10 questions that I constructed as information-seeking scenarios that students would encounter as they sought to utilize the library's resources. I designed each question to align with the student learning outcomes for the class by constructing them from the list of performance indicators students would be able to complete after participating in the activity. In addition, the 10 Information Relay questions correlate to one or more of the statements listed on the pre and post surveys.

I created two slightly different versions of the clue sheets. While students answered identical questions about the library's services, the questions that directed them to locate an item in the collection were different. For example, the first five teams were

instructed to go to the library's Leisure Reading section and find a book by James Patterson whereas the remaining teams had to go to the same section but find a book by Fern Michaels instead. I also randomized the questions for each team. By randomizing and varying the questions, I was able to minimize teams all going to the same area and observing how their cohorts were finding the requested items.

The Information Relay answers submitted by 14 teams were analyzed. The delivery method for team submissions was through an iPad using the *Evernote* app which afforded me the capability of reviewing the photo and text answers in real time. I divided the results of the Information Relay into the categories of Correct Answer, No Answer, and Incorrect Answer (when relevant). Results falling under the Correct Answer category indicated that the team successfully completed the information-seeking task. No Answer meant that the team did not submit an answer to the question. Results for the Incorrect Answer category were logged when a team attempted to answer the question but did not locate the correct resource.

C. Action Research Methodological Design

The Information Relay was tested with three different sections of the Student Life Skills Course. Professors Terry Rafter-Carles, Evelyn Walden, and Dannelle Maschoff agreed to participate in the study by providing their classes for assessment comparisons. The number of Student Life Skills students partaking in the project totaled 68. There was no control group. Students were given a pre-survey to serve as a baseline for their skills prior to the scavenger hunt. The answers that students submitted during the relay were compiled into a PowerPoint presentation and evaluated to determine the ratio of correct answers, none submissions, and incorrect answers. When students returned to the classroom, I administered a post survey to measure what effect, if any, the Information Relay had caused in their abilities to access the library's resources.

Significant Results

Fall 2013 Semester Results

Pre and post survey

68 students took the pre and post surveys. The pre and post surveys consisted of the same set of 5 statements about students' abilities to access library resources. Students indicated on a scale of 1 to 10 how true each statement was to them. For evaluative purposes, I divided the scale responses into four categories: Least True (Scale Rating: 1), Somewhat True (Scale Ratings: 2-3), Mostly True (Scale Ratings: 6-

9), and Most True (Scale Rating: 10). After the Information Relay and during the same class session, I gave students the post survey.

Statement 1: I am able to find items in the library without asking for help.

Rating Category	# of Students		% of Students	
	Pre Survey	Post Survey	Pre Survey	Post Survey
Least True	13	2	19%	3%
Somewhat True	34	17	50%	25%
Mostly True	16	35	24%	51%
Most True	5	14	7%	21%
Statement 1 - Average Rating Score				
Pre Survey: 4.5				
Post Survey: 7.3				

Discussion: I included this question because a certain level of independence is needed with information literacy. Students are enrolled at Valencia for a finite amount of time, but information literacy is a lifelong skill that they will need in order to make important decisions. If they learn how to utilize library tools and research information at our library, then they will be able to transfer these skills into their everyday lives.

From my experiences at the Reference Desk, I expected most of the answers to fall into the "not true" and "somewhat true" categories. The results met my expectations with 69% of students selecting scale numbers within these ranges on the pre survey. With just 5 students reporting that they were capable of independently finding library items, this data supports the need for additional instructional activities, such as the Information Relay, that gives students the opportunity to leave the confines of the classroom and practice accessing items and services in the library.

Initially, 21 students thought this statement was either "mostly true" or "most true" to them. After the Information Relay activity, this number more than doubled to 49 for a percentage increase of 41% on the post survey. As anticipated, "least true" and "somewhat true" are the most selected categories on the pre-survey meaning that students rated their abilities on the lower end of the scale in regards to finding information in the library without asking for help. The post survey statistics measure the impact of the Information Relay by showing a marked increase in students reporting that their abilities had improved and now the statement was either "mostly true" or "most true" to them.

Statement 2: I know how to use a call number to locate an item in the library.

Rating Category	# of Students		% of Students	
	Pre Survey	Post Survey	Pre Survey	Post Survey
Least True	33	5	49%	7%
Somewhat True	25	10	37%	15%
Mostly True	8	27	12%	41%
Most True	2	26	3%	38%
Statement 2 – Average Score				
Pre Survey: 3.1				
Post Survey 7.7				

Discussion: Call numbers are the foundation to the organizational structure of the library. If students do not know how to read call numbers, they will not be able to locate the library material they need. On the pre survey, 80% of the 68 students surveyed selected the lower ranges of the scale by choosing number ratings in either the "not true" or "somewhat true" categories for this statement. Only 3% of students reported that this statement was "most true" to them, meaning they possessed the ability to use a call number to locate an item in the library. With so many students unsure of the functionality of call numbers, more instruction is needed on these important tools. Furthermore, I plan to expand the discussion of call numbers into my non-Information Relay classes as well. In addition to highlighting them in the catalog, I will also show students physical library items and go into a more detailed discussion about how they work.

For the post survey, student responses show an improved ability to use call numbers with 52 of the 68 students indicating that the statement is now either "mostly true" or "most true" to them. This increase represents a 58% net gain from the pre-survey. I believe the active learning component of the Information Relay was an important factor in this increase. The concept of call numbers and using them as a tool means very little to students until they are on the library floor experiencing the process first-hand.

Statement 3: I understand the difference between a Reference item and a Circulation item.

Rating Category	# of Students		% of Students	
	Pre Survey	Post Survey	Pre Survey	Post Survey
Least True	33	5	49%	7%
Somewhat True	25	10	37%	15%
Mostly True	8	27	12%	40%
Most True	2	26	3%	38%
Statement 3 – Average Rating Score				

Pre Survey: 3.1
Post Survey: 7.7

Discussion: Although there is overlap with their content, reference collections generally house items such as encyclopedias and dictionaries. Items in the circulating collection typically explore topics in greater detail and are meant to be read from cover to cover. Circulating items check out while reference items do not. If students are able to identify the type of information they need and its corresponding location, this will allow them to efficiently satisfy their information need and avoid frustration.

As presented in the table above, 58 students out of 68 reported their abilities to be in the range of "least true" or "somewhat true" categories. This figure represented 86% of student participants. Only 10 students ranked their abilities in the higher categories of "Mostly True" and "Most True." As a result, many of these students run the risk of needlessly impeding or prolonging their search for appropriate material. The post survey showed improvements in their abilities to distinguish between a reference and circulation item. There was a net gain of 38 students, equivalent to a 63% increase, in the "mostly true" and "most true" categories for the post survey.

Statement 4: I know how to use the library catalog.

Rating Category	# of Students		% of Students	
	Pre Survey	Post Survey	Pre Survey	Post Survey
Least True	21	3	31%	4%
Somewhat True	28	8	41%	12%
Mostly True	16	28	24%	41%
Most True	3	29	4%	43%
Statement 4 – Average Rating Score				
Pre Survey: 4.1				
Post Survey: 8				

Discussion: The catalog is a major access point into the library's resources that gives students details on item availability, call numbers, and much more. Students must know where to go to access this tool and how to use it in order to locate the items they need. Yet, it has been my experience that many students do not possess these abilities. When I am at the Reference desk, I frequently train students on searching the catalog. Taking these training sessions into account, I was not surprised that 72% of students reported that the statement on using the library's

catalog was either "least true" or "somewhat true" to them. On the pre survey, 21 students or 31% of participants selected the lowest level of the scale that indicated this statement was "Least True" to them while just 3, or 4% of students, selected the highest level that indicated the statements was "Most True" to them.

Data from the post survey showed a major improvement in using the catalog. The results illustrated a 56% increase in the "Mostly True" and "Most True" categories after students had the opportunity to practice the skill during the Information Relay. Still, I would like to explore more methods in teaching the catalog that may provide me the strategies I need to reach the 16% of those students who still have difficulty using this valuable library resource.

Statement 5: If someone asked me what services East Library offered, I would be able to tell them.

Rating Category	# of Students		% of Students	
	Pre Survey	Post Survey	Pre Survey	Post Survey
Least True	24	2	35%	3%
Somewhat True	32	19	47%	28%
Mostly True	10	32	15%	47%
Most True	1	14	1%	21%
Statement 5 – Average Rating Score				
Pre Survey: 4				
Post Survey: 6.9				

Discussion: The services offered by the library such as research guides, print cards, QR codes and study rooms are designed to support students as they complete assignments. I included this question to give students the opportunity to explore these helpful resources.

The results of the pre survey showed that 36% of students reported that this statement was "Least True" to them while 48% reported that it was "Somewhat True." Only 1 student selected that this statement was "Most True." My colleagues and I constantly market and encourage students to take advantage of the library's resources. However, I believe students need to access these resources for themselves in order to fully understand their many benefits.

On the post survey, 46 students selected scale ranges within the "Mostly True" and "Most True" categories. This increase of 35 students represented a 51% gain. While I find these results encouraging, the average score for this statement was 6.9. This represents the lowest average rating out of all the post survey statements.

Therefore, I plan to solicit student and instructor feedback to determine how the Information Relay can be modified to better address the outcome for this statement.

Conclusion: Pre and Post Surveys

Although comparisons of the pre and post surveys show a promising trend of the Information Relay improving students' abilities to access the library's resources and services, the surveys also indicate that a sizeable number of students need further instruction even after completing the activity. As discussed in the results above, I will employ additional teaching strategies such as visual aids and active-learning opportunities to address the needs of these students. However, the students who rated their abilities within the lower scale ranges on the post survey highlight an important limitation of the Info Relay as a one-time-only activity. My 75-minute class provides a building block for information literacy—not the entire foundation. Therefore, while the Info Relay works well as an introduction to the library's resources and services, it should not be students' sole interaction with the library. As a result, many instructors who request the Info Relay often schedule a follow-up visit for class assignments where I deliver a more traditional information literacy session.

Information Relay

The Information Relay results of 14 teams, consisting of 3 to 4 students, were analyzed for the purposes of this FLO. Before starting the activity, teams were given the following: pre-survey, clue packets, PowerPoint presentation on the library, and an *Evernote* demo. The teams had 30 minutes to complete the activity. A combined total of 140 answers were possible for the 14 teams. The results of their responses are divided into the following 3 categories: Correct Answer, No Answer, and Incorrect Answer (when relevant).

Information Relay Results

2%

29%

69%

■ Correct Answer   ■ No Answer   ■ Incorrect Answer
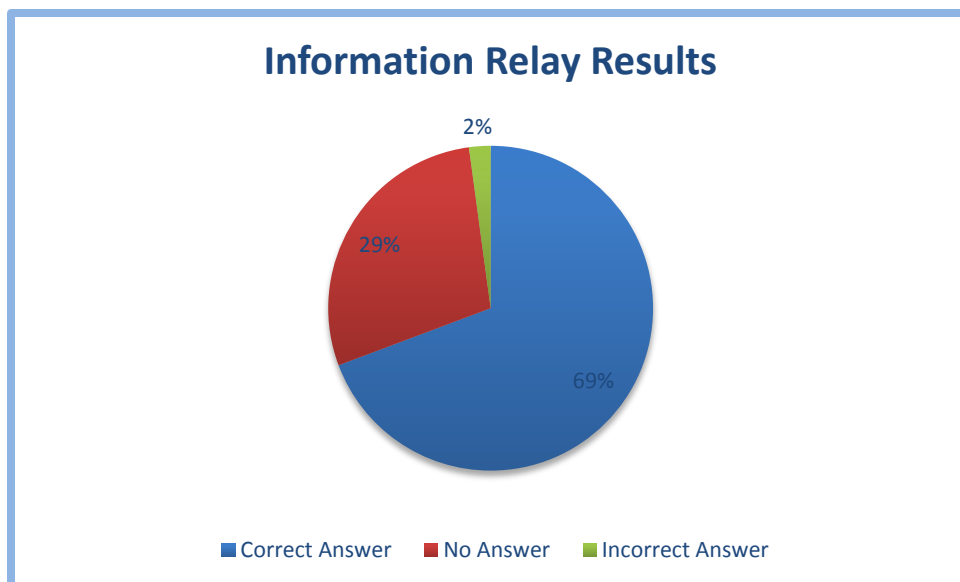
Correct Answers

The teams submitted 100 answers out of a possible 140. While 40 questions were left unanswered, these results somewhat align with what I anticipated. Of the 100 answers submitted, 97 of those answers were correct. Instead of being designed as an activity to be completed, the Information Relay was structured as a buffet of scenarios to give students as much experience with a variety of library-related skills as possible. Therefore, to refer to an old adage, the Information Relay was not about teams winning or losing but how they played the game.

The 97 correct answers represented 97 times that a teachable moment occurred about the library's resources. Moreover, due to the randomization of the questions, answers were submitted for all the questions—granted some more than others. So even if teams did not have the opportunity to complete a question, students still benefited from the review at the end of class when all the answers and strategies for the Information Relay were discussed.

The questions receiving the highest rate of correct responses included the following:

Question (abbreviated)	% of teams with a correct submission	Corresponding Statement on Survey
Locate the book with the call number REF LB2338.S347/Ref L 901.P447 2013	79	I know how to use the library catalog. I know how to use a call number to locate an item in the library. I am able to find items in the library without asking for help. I understand the difference between a Reference item and a Circulation item.
Locate a book by Stuart Woods	79	I know how to use a call number to locate an item in the library. I am able to find items in the library without asking for help.
Find the Matador Tip handout for Speech	93	If someone asked me what services East Library offered, I would be able to tell them. I am able to find items in the library without asking for help.

As evident by the above table, the questions on the Information Relay were often demonstrative of more than one of the statements featured on the pre and post surveys. To answer a question such as "locate a book by Stuart Woods," teams had to successfully complete a search in the catalog, identify the call number, locate the appropriate collection, and follow the Library of Congress's organizational scheme. Thus, the acquisition of the skills necessary to access the library resources worked in close concert like a set of dominos leading teams to a designated item.

Incorrect Answers

Out of the 100 answers submitted, 3 were incorrect. The questions receiving incorrect responses are listed below.

Question (abbreviated)	% of teams with an incorrect submission	Corresponding Statement on Survey
Locate the book with the call number REF LB2338.S347/Ref L	7	I know how to use the library catalog. I know how to use a call number to locate an item in the library. I am able to find items in the library without asking for

901.P447 2013		help. I understand the difference between a Reference item and a Circulation item.
Locate a book by Stuart Woods	14	I know how to use a call number to locate an item in the library. I am able to find items in the library without asking for help.

For the question about using a call number to locate a book, one team submitted an answer that was incorrect because they were in the correct library collection but had found the wrong book. In the case of the question about locating a book by Stuart Woods, the two teams that submitted incorrect answers found a book by Stuart Woods but not within the library collection in which they were directed to visit. During the Information Relay review, I used these incorrect submissions to highlight the importance of detail and organization when accessing information in the library. Although these simple oversights accounted for only 3 incorrect submissions, simple mistakes can mean the difference between success and failure when trying to satisfy an information need.

No Answers

There were 40 no answers. Due to the timed nature of the Information Relay, few teams finished the entire race within the allotted 30 minutes. However, since the skills needed to complete the questions overlapped, teams did not have to answer every question in order to benefit from gained experience. Furthermore, as previously stated, I led a detailed review at the end of class that included answers and search strategies for all the questions.

The questions with the highest rate of no answers appear below:

Question (abbreviated)	# of none submissions out of 14 teams	Corresponding Statement on Survey
Find the 2013 edition of the *Book of Majors*	64	I know how to use the library catalog. I know how to use a call number to locate an item in the library. I am able to find items in the library without asking for help. I understand the difference between a Reference item and a Circulation item.
Find the sign that gives the row number for the book *Best Resumes for College Students and New Grads*	57	I know how to use a call number to locate an item in the library. I am able to find items in the library without asking for help. I know how to use the library catalog.
Call number for *10 Things Employers Want You to Learn in College*	43	I know how to use the library catalog.

While I believe time constraints contributed to the majority of the no answers, I am aware that a few were indeed caused by teams not being able to locate the item. For instance, my colleagues who assisted me with the activity and those at the Reference Desk, reported that teams had difficulty finding the *Book of Majors* on the reference shelves. This occurrence is highlighted by the fact that the question for the *Book of Majors* had the highest rate of no answers. Teams may have experienced difficulty locating this title because the order of the reference books is sometimes disrupted by large reference volumes and shelf space.

As I solicit additional student and librarian feedback about this question and the others with high rates of no answers, I will also look for ways to better articulate the organizational nuances of areas such as our reference department as a way to enhance the access to these materials.

Spring 2014 Reimplementation

Pre and post survey

I decided to revise my assessment method of the Info Relay in Spring 2014. The terminology and ratings scale featured in my original survey were not the most ideal format for evaluating this FLO. I rewrote the survey with the help of Professor Marcelle Cohen who facilitates the Developing Effective Surveys workshop (FLO 1 Artifact 8). I removed the 10-point ratings scale and the "true" terminology, and replaced those elements with multiple choice options: strongly agree, agree, disagree and strongly disagree. Also, at Marcelle's suggestion, I added the option "don't know."

The five survey statements for the pre and post surveys remained the same. However, the post survey included one additional question: "The Info Relay helped me learn more about the library" (FLO 1 Artifact 9). This statement directly linked to the goal of my FLO and would serve as a direct answer to how the relay impacted students' abilities to access the library's resources. The post survey also included the new question: "What have you learned or gained (if anything) from the Info Relay activity?"

I administered the survey to two Spring 2014 sections of the Student Life Skills course taught by Professor Rafter-Carles and Professor May. The following table presents a compilation of the results from the pre and post surveys. Each category (Strongly Agree, Agree, Disagree, Strongly Disagree, and Don't Know) displays results quantified by the number of students and the percentage of students. The first number in each set represents the results of the pre survey. The second number represents the results of the post test.

Information Relay Pre and Post Survey Results:

Category			Strongly Agree	Agree
I am able to find items in the library without asking for help.		# of students	*3, 3	16, 18
		% of students	10%, 10%	53%, 60%
I know how to use a call number to locate an item in the library.		# of students	3, 5	9, 19
		% of students	10%, 17%	30%, 63%
I understand the differences between a Reference item and a Circulation item.		# of students	3, 6	6, 16
		% of students	10%, 20%	20%, 53%
I know how to use the library catalog.		# of students	4, 7	9, 19
		% of students	13%, 23%	30%, 63%
If someone asked me what services East Library offered, I would be able to tell them.		# of students	4, 7	7, 16
		% of students	13%, 23%	23%, 53%

Note: The first number represents the pre survey results. The second number represents the post survey results.

The post survey question that connects the Info Relay to student learning proved to be a beneficial addition. The table below shows that 90% of students responded with either "strongly agree" or "agree" to this statement.

Category		Strongly Agree	Agree
The Info Relay helped me learn more about the library.	# of students	9	18
	% of students	30%	60%

Another revision of the survey was the open-ended question: "What have you learned or gained (if anything) from the Info Relay activity?" A sampling of student answers appears below. These responses will help me understand the relay from the students' perspectives and will assist in the creation of future iterations of this activity.

What have you learned or gained (if anything) from the Info Relay activity?
"I learned how to look up books on the computer, and where the study and circ areas are located."
"How to use the library's system to locate a book. What helpful info the library offers."
"That [the library] isn't easy as ABC…123."
"I learned how to focus on a search, and working as a team helped."
"I learned that the library is a confusing place."
"The library relay activity didn't really teach me anything new. It just showed me where everything in this library was. All libraries have very similar set ups, this activity was helpful because it showed where to find everything in this library."
"I learned a lot about the library and I'm glad that I got this information. I feel more comfortable using the library."

Information Relay

Nine teams comprising 30 students participated in the reimplementation. A combined total of 90 answers were possible for the 9 teams. Based on the feedback received from the Fall relays, I replaced *Book of Majors* with a new reference title on the clue sheet. Additionally, I explained in more detail the differences between the library's collection areas. The Spring 2014 students' 72% correct answer rate was slightly better than the Fall 2013 students' 69% rate. The Spring 2014 teams submitted a total of 65 correct answers. There were 25 no answers. Unlike the Fall relays, no incorrect answers were submitted.

Reimplementation Results

28%

72%

■ Correct Answer   ■ No Answer
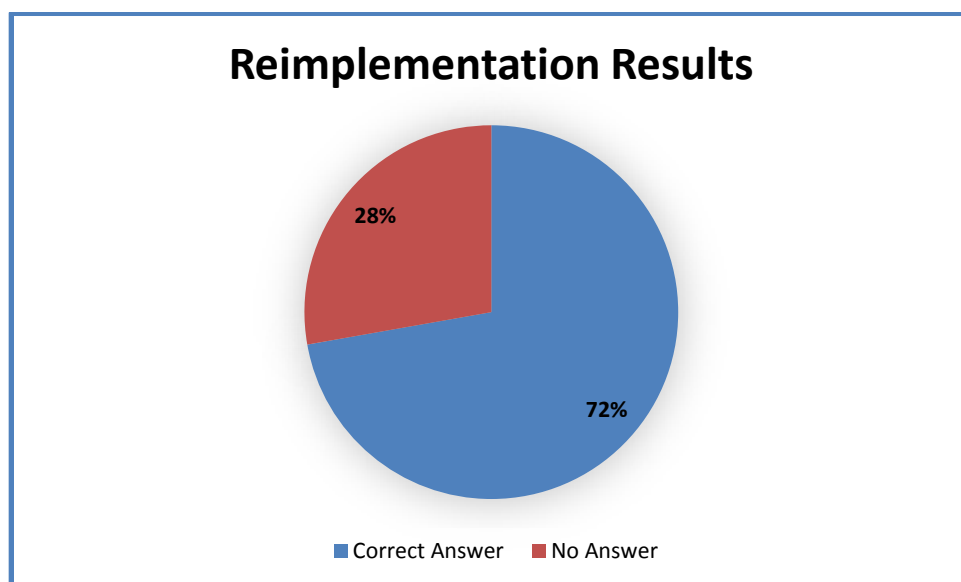
Reflective Critique

A. General Reflection

The Information Relay was an innovative project that added a new component to the traditional library instruction. In every class, I tell students about the myriad of ways the library can help them in their lives and urge them to take advantage of this great resource. However, I fear sometimes my words alone do not provide the motivation to get them to utilize the library outside of the classroom setting. For this reason, I was excited about implementing the Information Relay because it gave students an active-learning experience where they could interact with these resources and discover for themselves how useful they can be.

As a result of the Info Relay, I have learned that instruction must be coupled with assessment. The assessment opportunity is important for both students and for me. I need a means of evaluating the effectiveness of my teaching whereas students need a way of practicing the concepts being taught.

During the early days of the Information Relay, the librarians reported that students would flock to the reference desk as soon as I released them to start the activity. At first, I found this frustrating because I felt I had sufficiently covered the information students would need to answer the questions. In addition, I wanted the Info Relay to teach students how to find the information themselves. However, I soon began to view their actions as a teachable moment for myself. What was missing in my presentation that students needed to know? I now ask this question in all of my classes and try to include some form of assessment that will help me determine concepts in need of further clarification.

While technology is an important part of the relay, it has presented its share of challenges. For example, *Evernote*, the app used to submit the answers, has undergone multiple updates. After each update I had to learn the new interface and revise my instructional materials. Moreover, *Evernote* syncing issues in Fall 2013 caused disruptions in the real-time delivery of some of the teams' answers. As a result, in Spring 2014, I migrated the activity to *Twitter* which operated well as a delivery system. In Summer 2014, I successfully worked with colleagues for a *Facebook* version of the relay. Not only did *Facebook* improve upon *Evernote*'s syncing speed, it also reduced the preparation time for the photo review at the end because it eliminated the need to transfer the photos to PowerPoint. With *Facebook*, all of the questions and answers were automatically collected in one place.

In addition to issues with technology, scalability is also a concern. Currently the Information Relay is offered for 75-minute classes and it generally takes the entire session to complete. Furthermore, I am the primary librarian that offers the activity. For those reasons, I have not been able to accommodate every instructor that has expressed interest in bringing their class in for the Information Relay. In the future, I hope to expand the offerings of the relay by recruiting more librarians to teach it and by looking into ways to trim the activity so that it may be accomplished in a 50 minute class.

Lastly, creating an assessment for the Info Relay provided its own set of challenges. For the pre and post surveys, I included the statements about the library and the ratings scale because I felt this format would be an efficient way to measure what students had learned during the activity. Yet there were concerns about what my survey actually measured. Did the survey measure ability or confidence? After consulting TLA, I researched the interdependent nature of ability and confidence. Page 28, under the heading of "Assessment Method," includes a summary of my findings. Additionally, I added the results of the Info Relay activity to further support that the survey data did, indeed, measure ability. Along with consulting TLA, I reviewed

previously submitted portfolios that used rating scales. The language of the Faculty Learning Outcomes for these portfolios did not mention confidence. Instead, the discussion of the results focused on students' abilities. I also liked that the surveys required students to self-reflect on their own abilities—something they will have to do many times over in their post Valencia lives when listing skills on their resumes or managing projects in a professional setting.

Although the surveys I adapted from Peter and Dugan's *An Action Plan for Outcomes Assessment in Your Library* provide evidence of student learning, I discovered certain pitfalls in the design of the assessments once I began to analyze the results. For instance, my ratings scale of 10 should have ideally been only as high as 7 or 5. Also, the instructions directed students to indicate how true the statements were to them with 1 being the least true and 10 being the most true. I believe the syntheses of this project would have been easier had I included traditional Likert terms such as "agree" and "disagree." Another issue is with the timing of the assessments. The next time I evaluate the Information Relay, I will ask the instructors to have their students complete the pre and post surveys apart from the library session. I believe this will give students more time to reflect on their library-access abilities and the experience of the activity.

The reimplementation of this project during the Spring semester allowed me to address many of my concerns with the flow of the activity and the assessment. After reviewing the results of my initial relays, I added more instruction about call numbers and the differences between reference and circulation books. I also redesigned my survey to align more with traditional Likert terms and scaling. The revisions strengthened the assessment and made the survey easier for students to answer. The changes also made for a clearer aggregation and presentation of the results when I participated in Valencia's 2014 Action Research Poster Session.

B. Critical Evaluation of Each Essential Competency in this FLO

1. Assessment

- Employ formative feedback to assess the effectiveness of teaching, counseling, and librarianship practices

  Each Information Relay I teach is a product of all of the experiences and feedback I have received from previous sessions. The photo submitted answers, student questions, instructor comments, and surveys help me to implement informed, corrective actions that strengthen the impact of my librarianship practices. Due to the real-time submission of the photos, I am able to see in a timely fashion what concepts students struggle with after my presentation. For example, I noticed a pattern of teams locating a book in the circulation area when the question asked for a book in the

reference department. As a result, in subsequent sessions, I elaborate more on the differences between circulation and reference books and provide more examples.

My observations from the Info Relay also helped in gathering formative feedback. After most sessions, I made notes of areas I thought needed improvement and issues that arose. One such area was the photo review at the end. I noticed that I was doing most of the talking without giving students the opportunity to share their experiences and strategies for accessing the library's resources. To address this issue, I now make a point of calling on teams to explain the steps they went through in order to answer a given question. I have found that this added dialogue has served as an impetus for increased peer to peer learning and has made the presentation more inclusive.

The surveys I administered to students not only assessed their learning but they also provided valuable information on the effectiveness of my teaching. I correlated their answers on the survey to sections of my lesson that may be improved to help further student comprehension on a particular topic. These answers have helped me in other classes as well. As I teach traditional information literacy sessions to classes such as Composition I and Speech, I rely on data from the Information Relay to construct my lesson plans and aid my instructional delivery.

In the future, I would like to explore additional avenues for formative feedback. As the Information Relay grows in popularity, my colleagues are also starting to offer the activity. I had the opportunity to observe one of these sessions and found the experience to be valuable in helping me reflect on this project. As an observer, I was able to view the Information Relay from the students' perspectives and evaluate the effectiveness of the presentation. I witnessed the initial puzzlement of many of the teams upon exiting the classroom which highlighted the value of offering an active learning activity to familiarize students with the library. However, the disorientation of the students quickly dissipated as the Info Relay progressed and they became more comfortable with accessing the resources. Also of note is the level of team work resulting from the interpersonal dynamics of the groups. On more than one occasion, I observed peer-to-peer teachable moments as students located library items by reiterating concepts I discussed in class. I would like to regularly schedule these observations to ensure I am delivering the best instruction possible.

In addition to the observations, I would like to solicit more instructor feedback through surveys. Since the initial creation of the Information Relay, I have received minimal input from instructors as to their perceived strengths and weaknesses of the project. I believe their comments will further assist me in targeting areas for improvement with the project and my implementation of the activity.

- Give timely feedback on class activities, exams and papers

The utilization of the *Evernote* app on the iPads allowed for feedback to occur while students were in the midst of completing the activity. *Evernote* enabled me to review the teams' answers and assess their progress. An indication that a team

needed help was when the pace of their submissions slowed. From past sessions, this occurred for a variety of reasons including trouble locating library items, not understanding a question, and technical difficulties. These situations presented formative learning opportunities where I found the team in question and offered additional instruction that further assisted the students in properly navigating the library. The prompt nature of this feedback created a safety net for students because it prevented them from being hindered by one clue or issue and allowed them to get the most out of the Information Relay experience.

Another way students received timely feedback was through the PowerPoint photo review at the end of class. As we progressed through the visual slides as a class, each team saw the photo answers they submitted along with the photo submissions from the other teams. While I led the class in a discussion about the various questions and answers, students saw for themselves how well they performed compared to their peers.

In North Carolina State University Library's Mobile Scavenger Hunt, the facilitators scored the team answers. I think the scoring component gives students a more accurate picture on how well their teams performed in completing the activity. However, unlike North Carolina State University which recommends at least 2 facilitators, I am usually the sole librarian conducting the Information Relay due to staffing levels. As a result, it is difficult for me to prepare the PowerPoint photo review and score the teams within the thirty minute timeframe. An Information Relay I co-facilitated with Math professor, Steve Francis, may have helped me resolve this issue. When teams returned to the classroom, he instructed them to swap iPads and grade each other's answers. This time-saving strategy not only offered a means for quickly scoring the submissions, it also worked to maintain student engagement with the activity and provided yet another teachable moment when teams observed the answers of their peers.

2. Inclusion and Diversity

- Develop reciprocity and cooperation among students

The team aspect of the Information Relay reaped many benefits for students in terms of reciprocity and cooperation. As they progressed through the questions, a group dynamic formed because the team members had become a unit with the goal of completing the activity. Each of the defined roles within the teams served as pieces to the puzzle that rewarded students with the information they needed. Therefore, they depended on each other and worked in concert to perform well on the tasks asked of them.

When selecting the roles of iPad operator, clue reader, and model, students decided amongst themselves without the help of the librarian. At this point, both

an internal and external negotiation was taking place. Internally, students were assessing their strengths and weaknesses to see which role their skillset would best align. Once this internal negotiation took place, students then externally negotiated with their peers for the role of their choice.

This portion of the Information Relay has worked well in class. Students often listed working in teams as a highlight for the activity. Indeed, as soon as I told students it was time for them to decide their roles, they huddled together in a spirit of collaboration and discussed which roles were suitable for whom.

- Vary assessment measures and techniques to engage cognitive diversity

I used multiple assessment measures and techniques throughout the Information Relay. At the start of class, I asked students to make a list of what came to mind when they heard the word library. After a brief time of discussing their thoughts within their groups, students reported back to the class. This think-group-share activity served as a schematic starting point for students where they often heard about resources and services that they did not previously know the library offered. This activity also served as an icebreaker by getting them to communicate with each other.

After I utilized visual and verbal instruction with the help of the PowerPoint presentation, I transitioned to the active learning portion of class. I assigned each team an iPad and they followed along with me as I demonstrated how to submit answers using the *Evernote* app. Then, for the actual relay, students left the classroom as they navigated various scenarios that required them to locate information in the library. The kinetic element of the activity, as well as the opportunity to engage in hands-on library exploration, left a significant imprint on students. After listening to me talk about the library's resources and how to find them, they had the opportunity to immerse themselves in the environment and gain first-hand experience with its tools.

Another assessment measure I used was the photo review at the end which served as a wrap-up for the class. Including photos was a fun, visual way for students to learn how correctly their teams answered the questions. Initially, when I presented the photo review, I included the questions and photos on the same slides. In later iterations of the Information Relay, I posted the questions to their own slide because I wanted students to ponder the questions and reflect upon the strategies they used before I revealed the photograph answers.

The questions for the Information Relay provided another element of varying assessment measures for cognitive diversity. In addition to straightforward questions involving call numbers and material titles, I included questions that guided students to areas that may go unnoticed by them under different circumstances. One such area was the two book displays that feature monthly

themes designed to highlight specific items within our collection. Initially, the question on the clue sheet asked students to take a picture in front of either the small book display or the large one. However, I found this question was not providing enough value to the activity. While students were made more aware of the book displays, they were not taking the time to actually see what was inside of them. As a result, I now give students a title of a book which may be in either display case. In order to take a picture of the correct display case, they have to browse the various books on display to determine which case is the correct one. This allows for more exploration and discovery of what the library has to offer.

For future Information Relays, I would like to add even more assessment activities to the class. When asked for feedback, a few students felt the scavenger hunt did not challenge them enough because they were already frequent library users. While these students were in the minority, I would like to find a way to engage them as well. Perhaps I could use them as peer facilitators on the library floor when teams have questions. Another solution would be to give them more advanced questions for their clue sheets.

3. Learning Centered Teaching Strategies

- Employ methods that motivate students to learn

The Information Relay is designed to run like a game. Students were divided into teams. The questions were set up like puzzles to solve. Plus, it was a timed activity with a first, second, and third place. When the Information Relay started, I saw students' competitive natures motivate them to answer the questions because they wanted to win. Another motivator was being able to take photographs. Many of Valencia's students are of the millennial generation who are frequent users of social media websites such as *Facebook*, *Instagram*, and *Twitter*. The photographs provide a familiar context and fun visual element to the review. Not surprisingly, the photo review at the end is the portion of the relay that gets the biggest laughs. Students look attentively at the photos to see their peers strike a pose but, at this juncture, I am also leading the class in a discussion about their strategies for answering the questions. As a result, students have yet another opportunity to learn valuable best practices for locating the information they need in the library.

Another motivator for students was the customization of the questions. Each clue sheet was designed for a specific class. For instance, the questions for a Student Success class would pertain to finding resources dealing with college preparedness, career exploration, study habits, and scholarships. As students located their answers, they were being exposed to relevant resources that would help them complete their assignments. Students often brought back library material that they discovered during the relay so they could check out the items

once class had ended.

One roadblock that periodically arose was the matter of incentives. Inevitably, I would get a team member that asked, "What do we get if my team wins?" My reply of, "Knowledge, of course!" was not always the sure-fire motivator it should have been. Therefore, in addition to having the class give the first three teams a round of applause, I have handed out candy, bookmarks, lanyards, and other promotional items I have received from library vendors. A librarian colleague who also does a scavenger hunt has suggested asking instructors to give extra credit as well.

- Use cooperative/collaborative learning strategies

The collaborative strategy of the Information Relay was the team component. While each team usually had 3 to 4 members, this number varied depending on the size of the class. Within each team, members decided who would pose for the photos, who would operate the iPad and who would read the clues. If a team had more than 3 members, then more than one student posed for the photos. The responsibility to choose roles within their teams allowed students to assess their strengths and/or weaknesses in each role and choose accordingly. Additionally, the authority to select a role within the group gave students ownership and accountability because their fellow students looked to them for leadership on that particular task.

The team component also increased reciprocity in the groups in terms of learning and the exchange of ideas by providing numerous opportunities for peer-to-peer teachable moments. In class, as students prepared for the activity, I observed members of the team gathered around the iPad operator as he explained how to open an application on the device. In another instance, I observed the clue reader pointing to the call number signs explaining where to locate an item for one of the questions.

One issue of dividing students into teams was that the teams were picked at random. There was no prior assessment of student abilities to assure skillsets required for each role were met. Thus, the potential existed for a team not to have any members with a needed, key ability. For example there was one group where none of the students had ever operated an iPad. While I give a demonstration on how to submit an answer on the iPad, this group still struggled to complete the tasks because the device was so new to them. In the future, additional instructor input may work to address this issue. Since discipline instructors are more familiar with the strengths and weaknesses of their students, they may be better able to divide the students into groups to ensure each needed skillset is equally represented. Another solution would be to change how I divide the students into the teams. Instead of asking students to choose team names, I could have them choose the roles they are comfortable with and then divide them into groups.

4. Outcomes-based Practice

- Align learning opportunities and assessments of course learning outcomes and program learning outcomes with the student core competencies

Information literacy is the Program Learning Outcome for Valencia's library instruction classes. Additionally, information literacy is listed as a General Education Outcome. The student learning outcome for the Information Relay was that, upon its completion, students would be able to access library resources—an important step toward developing information literacy. As evident by the pre survey I administered, many students were not sure of how to accomplish this task. The low ratings on the pre survey served as indicators that vital library access points such as the catalog, service desks, and collection materials present challenges to students because they either do not know how to use them or they simply do not know that they exist.

The Information Relay built an environment where students were able to explore the library and practice utilizing these access points. A question such as the one asking students to find a specific reference item required multiple steps and interactions with the library's resources to answer. For example, students needed to search the catalog, find the correct call number, locate the collection area, and follow the Library of Congress organizational scheme in order to access the material. Therefore, the questions gave students valuable library experience that would not only help them complete the Information Relay but would also transfer to skills they would need to help them with accessing information for their other academic disciplines.

The learning opportunities of the Information Relay were also aligned to the student core competencies: Think, Value, Communicate, and Act ("Student Core Competencies"). The questions, which replicated real-life information literacy scenarios, aligned with the student core competency of Think by presenting students with an information need. Students had to "employ the facts, formulas, [and] procedures of the discipline" to satisfy this need. In order to accomplish this task, they utilized library tools such as the catalog and the library of congress call numbers to locate material.

In addition to the student core competency of Think, the Information Relay also aligned with Act. One of the indicators for Act is to "implement effective problem-solving, decision-making, and goal-setting strategies." As students progressed through the activity they formulated strategies for the purpose of information retrieval. For the Value competency, students had to "make reasoned judgments and responsible commitments" when they negotiated the selection of the team's roles: model, iPad operator, and clue reader. Students worked with their peers, who may have possessed differing ideas, to determine which person would be

best for a particular role. When a student accepted a role, he or she made a commitment to the team to perform the duties as assigned because if he or she did not, the team might fail.

The teamwork element of the Information Relay also aligned with the Communicate component of the student core competencies. Students had to verbalize their thoughts as they interacted with their fellow teammates. Furthermore, upon leaving the class session, students had acquired a new vocabulary to assist them in "employ[ing] methods of communication appropriate to [their] audience and purpose." Terms such as call number, reference, and circulation are important words in the library world. Exposure to these words will help students better communicate their needs to the library staff at Valencia and other institutions, and will also assist them in locating library material.

Going forward, I would like to include additional learning opportunities that delve deeper into information literacy abilities such as evaluation and application of library materials once students obtain them. Access, while important, is a first step in a long process in assuring an information need is satisfied. However, I am not sure such additions are within the scope of the one class session afforded the Information Relay. The activity typically takes 75 minutes from start to finish so it is doubtful more complex questions which may take longer to answer could be completed within that time frame.

Source Cited:
"Student Core Competencies." *Student Core Competencies and General Education*

   Outcomes. Valencia College. 2014. Web. 6 Nov. 2014.

- Construct measureable learning outcomes

The Teaching/Learning Academy's Outcomes-based Practice workshop gave me a well-rounded understanding of the significance of learning outcomes and the importance of making these outcomes measureable. Prior to the workshop, the application of learning outcomes to my instruction was more of an internal process. While I knew why I included certain activities or examples in lessons, I did not formally evaluate nor document my learning opportunities and assessments as they related to student learning outcomes. Now, student learning outcomes are the first item on my list when designing a new lesson.

The Outcomes-based Practice workshop and implementation of the Info Relay have guided me to look at the end-game impact of my teaching first. To this end, the workshop's presenters advised participants to consider two questions:

1. What will students be able to do?

2. How will I know they can do it?

The answers to these questions served as the starting point for my student learning outcomes. Additionally, I learned about the essential ingredients for measurable learning outcomes which have the following characteristics: a learning result, action oriented, clearly stated, cognitively appropriate, and succinct.

The learning outcome for the Information Relay is that students will be able to access library resources which may include reference books, circulation books, study rooms, databases, apps, and print cards. The *Evernote* answer submissions allowed me to determine how well students were fulfilling this outcome. As an example, one question read, "Stuart Woods is just one of the bestselling authors in our Leisure Reading Collection. Locate one of his books..." When I received photos of students holding a Stuart Woods' book, I knew that they had achieved the learning outcome for the class session. The photograph served as indication that students had searched the catalog, identified the call number, accessed the appropriate collection, and retrieved the book they needed.

5. Scholarship of Teaching and Learning

For this FLO, which was an adaptation of the Mobile Scavenger Hunt created by North Carolina State University, I consulted experts, colleagues and students. The culmination of this feedback continues to assist me in improving my project so that I may better address the needs of students. On many occasions, my fellow librarians have observed the Information Relay and offered valuable advice from their many years of experience. Students have also been major contributors in helping me with this FLO. Through assessments, conversations, and personal observations students have helped me adjust elements of the Information Relay to make it a more useful experience.

The current influence of technology on instruction at Valencia's East Library highlights the profound impact technology has had on my profession and the information landscape. Particularly, the utilization of iPads for my teaching practice has made my classes richer in student engagement and teachable moments. I credit the Information Relay for expediting my familiarity with the iPad which, in turn, has helped me to better assist students who are heavy users of the device.

The technology used in this project also helped me understand how real-time communication is changing the way students consume information. While *Evernote* caused a few issues with the execution of the Information Relay, the app provided a powerful platform for timely assessment and feedback. In Spring 2014, I attended the Humanities Speaker Series presentation given by television personality and writer, David Pogue. During his presentation, Mr. Pogue

discussed how real-time communication is becoming increasingly popular with younger generations. Proportionately, older means of correspondence such as voice mails, email, and even *Facebook* are declining in usage. A sizable number of the students in my classes and those who took the relay are in the demographic Mr. Pogue described to the audience. Therefore, I believe the use of the real-time functionality of *Evernote* enhanced my classroom instruction by reflecting the current communication behavior of students.

As a result of this action research project, I now possess a greater ability to reflect upon and assess my teaching practices and my impact on student learning. I find that my other library instruction classes and skill shops have become mini action research projects where I am able to utilize the skills I learned from creating and evaluating the Information Relay. A few of these skills include using the Qualtrics survey tool, incorporating the iPad as an instructional device, and creating presentation material. Furthermore, I am more knowledgeable about Valencia resources and departments that will help my continued growth as a librarian.

After piloting the Information Relay with the Student Life Skills Division, I discussed the project in several public forums including meetings and workshops. However, I found that the best promotion of this activity resulted from word of mouth. Since my initial test run with the Student Success classes, I have facilitated the Information Relay for discipline areas which include Speech, Composition, Humanities, Education, and Math. Additionally, I hosted a relay for the Student Development Department as an orientation for their new Student Leaders. Going forward, I would like to publish an online Information Relay LibGuide which provides an overview of the activity and file templates. I will also make the Information Relay more accessible to my colleagues by adding files to the cloud-storage service Dropbox.

C. Plan for Dissemination

My plans for dissemination include uploading my action research project into the AR Builder and presenting the results to my ILP Review Panel. I have presented my project for a Student Life Skills Division Meeting, Destinations, Circles of Innovation, and my fellow librarians. Additionally, I will research conferences where I may present my findings.

D. Supporting Artifacts for FLO# 1

FLO 1 Artifact 1A

Clue Sheet

Directions: Submit your answers using the EverNote App on your team's iPad.

1. You're hired! The book series *Careers in Focus* includes valuable information that gives you an insider's look on many different career paths. Locate one of the many books in this series and take a picture of the model with it.

2. What is the call number for the book *10 things employers want you to learn in college, revised: the skills you need to succeed*?

3. Locate the book with the call number **REF LB2338.S347 2013** and take a picture of the model holding the book while giving the peace sign.

4. Stuart Woods is just one of the bestselling authors in our **Leisure Reading Collection**. Locate one of his books and take a picture of the model holding it like a trophy.

5. In order to print or make a copy, you need a copy card. Find the machine where you can purchase a copy card and take a picture of the model giving it a round of applause.

6. Our **Matador Tips** handouts suggest databases you can use for classes like English Composition, Speech, and Humanities. Find the Matador Tips handout for **Speech** and take a picture of the model with it.

7. Our reference collection, which is for in-library use only, is a treasure trove of information on a variety of subjects. Find the 2013 edition of the *Book of Majors* and take a picture of the model giving it a thumbs up.

8. Take a picture of the model pointing to the sign posted outside a study room that tells you how long you can check one out and how many people can use it at one time.

9. Take a picture of the model in front of the sign that gives the row number for the book *Best Resumes for College Students and New Grads*.

10. The library has book displays that feature monthly themes and programs. Locate the display that has the book *The Complete Student: achieving success in college and beyond* by Alan Geib. Take a picture of the model with the display.

Congratulations! You've completed the East Campus Library Information Relay. Now head back to class and cross the finish line.

East Library Floor Layout

210 CLASSROOM

203 204 205 206 CLASSROOMS

COPIERS

CIRCULATION

REFERENCE DESK

COMPUTER LAB DESK

ENTRANCE

RESTROOMS

4-216 SL
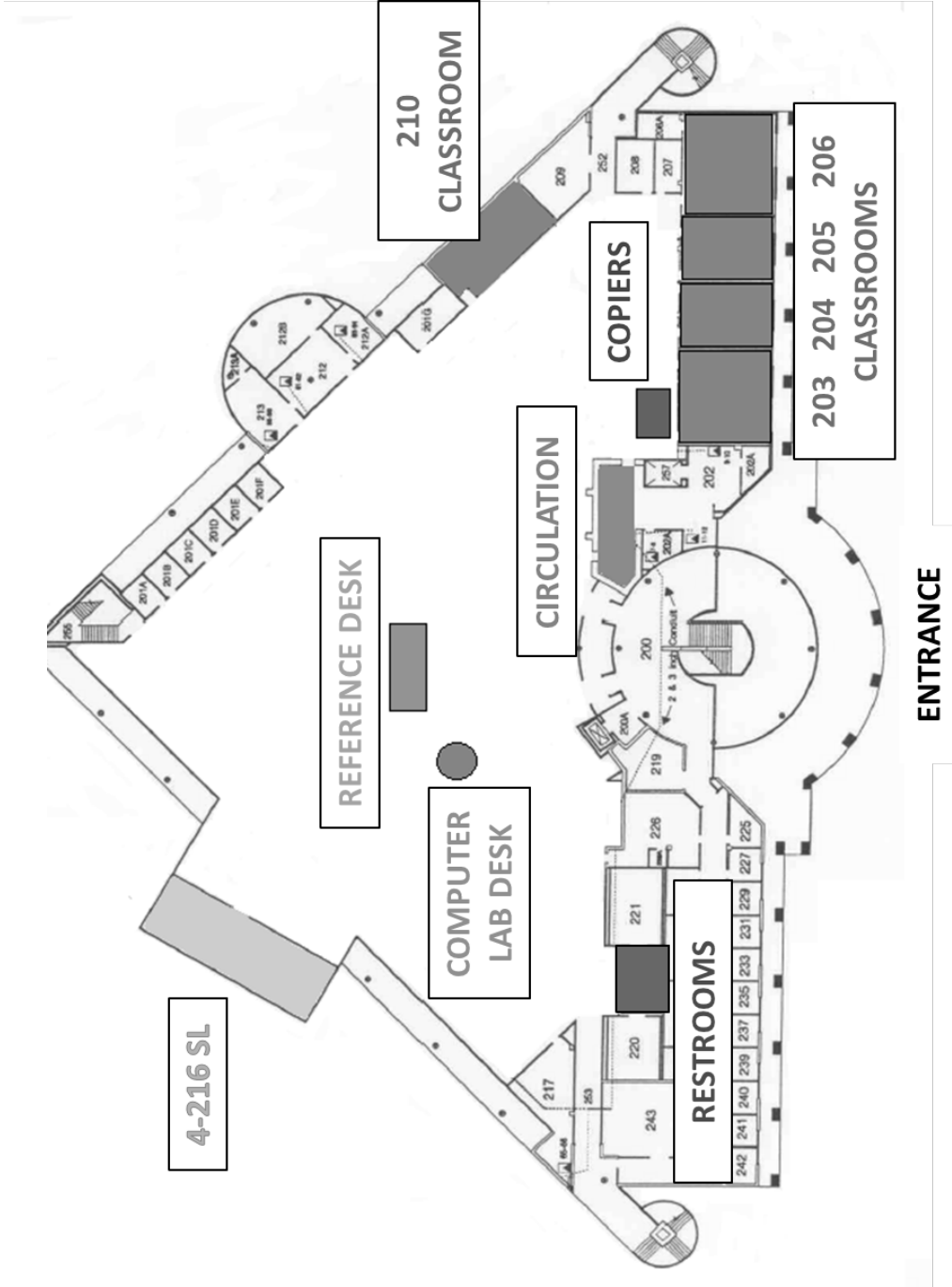
FLO 1 Artifact 1C
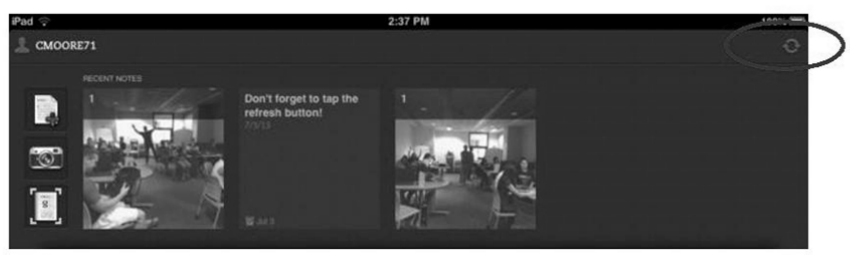
4. **Some answers require a photograph.**

Tap this to take a picture. Once you have snapped the photo, click the blue check at the right bottom of the screen to return to your note.
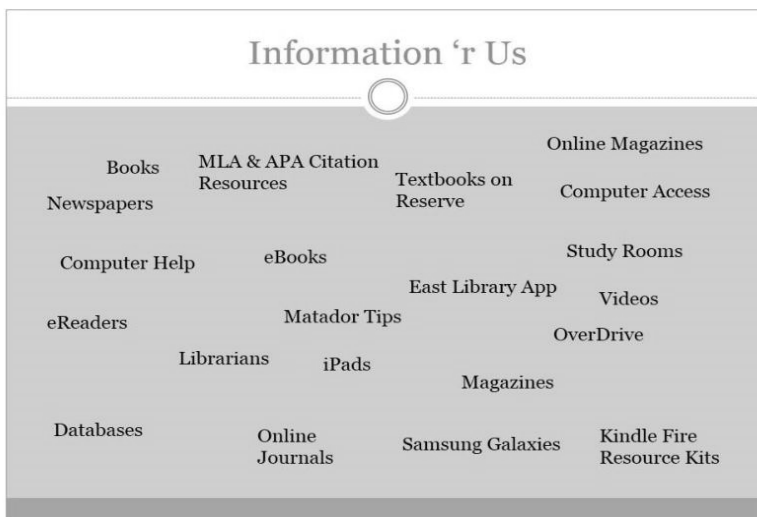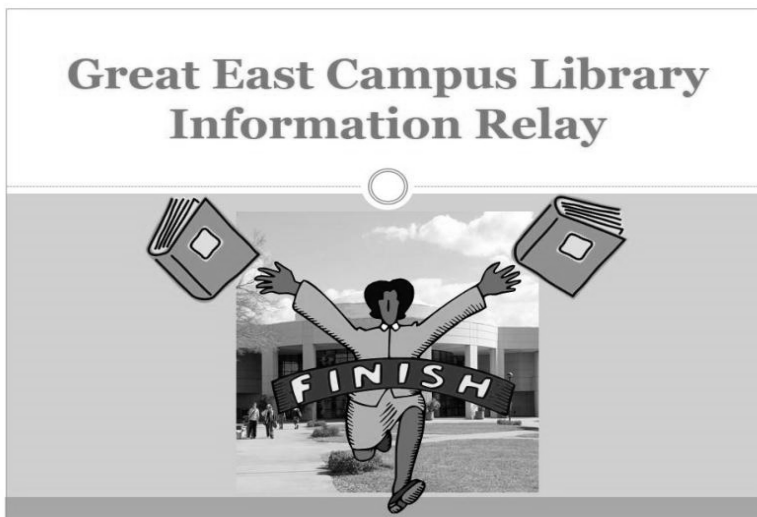
One question requires you to take a screenshot on the iPad. Your screenshot will appear on the camera roll.

Tap this icon to bring up the photos on your iPad. Tap a photo to insert it into the note.

5. To take a screen shot, press the home button and power button at the same time. You will see a brief flash. The screen shot will be added to the camera roll.

FLO 1 Artifact 2

Great East Campus Library
Information Relay

FINISH

Information 'r Us

Books

MLA & APA Citation
Resources

Textbooks on
Reserve

Online Magazines

Computer Access

Newspapers

Computer Help

eBooks

Study Rooms

East Library App

Videos

eReaders

Matador Tips

OverDrive

Librarians

iPads

Magazines

Databases

Online
Journals

Samsung Galaxies

Kindle Fire
Resource Kits

FLO 1 Artifact 2

Info Relay Details

- Organize into teams
- Clue Packet: clue sheet, map of library, Evernote tip sheet
- Submit answers using Evernote App on iPad
- 30 minutes
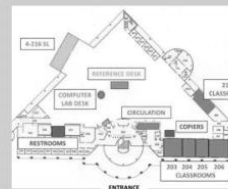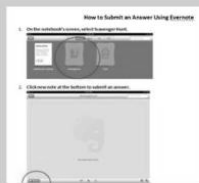
Reference Desk

FLO 1 Artifact 2
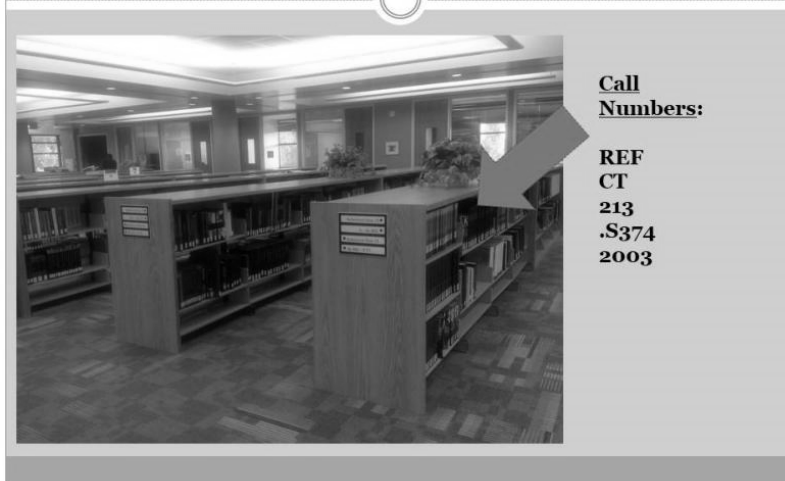
FLO 1 Artifact 2

Catalog Computers and Print Station

Circulating Books

Call Numbers:

CT
213
.S374

Leisure Reading Collection

FLO 1 Artifact 2

Circulation Desk

Info Relay Etiquette

- Inside Voices

- Be mindful of other library users

- Return items exactly where you found them

FLO 1 Artifact 2

Take 30 seconds to decide who will:

- Enter notes into iPad
- Read the clues
- Pose for photos

Let's take a look at your iPad

Find Evernote

FLO 1 Artifact 3

INFO RELAY REVIEW

Beyond the finish line.

Clue #1

You're hired! The book series ***Careers in Focus/Career Information Center*** includes valuable information that gives you an insider's look on many different career paths. Locate one of the many books in this series and take a picture of the model with it.

FLO 1 Artifact 3

Clue #1 Answer

Clue #2

What is the call number for the book *10 things employers want you to learn in college, revised: the skills you need to succeed/Active interviewing: branding, selling, and presenting yourself to win your next job*?

FLO 1 Artifact 3

Clue #2 Answer

Clue #3

Locate the book with the call number **REF LB2338.S347 2013/REF L 901.P447 2013** and take a picture of the model holding the book while giving the peace sign.

FLO 1 Artifact 3

Clue #3 Answer

Clue #4

Stuart Woods/Fern Michaels is just one of the bestselling authors in our **Leisure Reading Collection.** Locate one of his books and take a picture of the model holding it like a trophy.

FLO 1 Artifact 3

Clue #4 Answer

Clue #5

In order to print or make a copy, you need a copy card. Find the machine where you can purchase a copy card and take a picture of the model giving it a round of applause.

FLO 1 Artifact 3

Clue #5 Answer

Clue #6

Our **Matador Tips** handouts suggest databases you can use for classes like English Composition, Speech, and Humanities. Find the Matador Tips handout for **Speech/English** and take a picture of the model with it.

FLO 1 Artifact 3

Clue #6 Answer

Clue #7

Our reference collection, which is for in-library use only, is a treasure trove of information on a variety of subjects. Find the 2013 edition of the **Book of Majors/Career Information Center** and take a picture of the model giving it a thumbs up.

FLO 1 Artifact 3

Clue #7 Answer

Clue #8

Take a picture of the model pointing to the sign posted outside a study room that tells you how long you can check one out and how many people can use it at one time.

FLO 1 Artifact 3

Clue #8 Answer

Clue #9

Take a picture of the model in front of the sign that gives the row number for the book *Best Resumes for College Students and New Grads/The 7 Habits of Highly Effective Teens.*

FLO 1 Artifact 3

Clue #9 Answer

Clue #10

The library has book displays that feature monthly themes and programs. Locate the display that has the book *The Complete Student: achieving success in college and beyond/Brideshead Revisited.* Take a picture of the model with the display.

FLO 1 Artifact 3

Clue #10 Answer

That's all folks...

Hope to see you soon!

FLO 1 Artifact 4

East Library Info Relay Survey

Part 1: Pre – Survey

The purpose of this survey is to measure your confidence level with using the library and its resources before you complete the Info Relay. There are no right or wrong answers.

1. Using a scale of 1 to 10, indicate how much of the following statements are true to you.

Least True ⟶ Most True

I am able to find items in the library without asking for help.	1 2 3 4 5 6 7 8 9 10
I know how to use a call number to locate an item in the library.	1 2 3 4 5 6 7 8 9 10
I understand the differences between a Reference item and a Circulation item.	1 2 3 4 5 6 7 8 9 10
I know how to use the library catalog.	1 2 3 4 5 6 7 8 9 10
If someone asked me what services East Library offered, I would be able to tell them.	1 2 3 4 5 6 7 8 9 10

2. How long have you been a Valencia student? _____

3. How many times per month do you visit East Library?

A. Less than 3

B. 4 – 7

C. 8 – 12

D. 12 or more

FLO 1 Artifact 5

Great East Campus Library
Information Relay

RELEASE FORM FOR USE OF PHOTOGRAPH

Title of Project: East Campus Library Information Relay

Person Leading the Study: Courtney Moore, Reference Librarian
Phone: 407-582-2456, email: cmoore71@valenciacollege.edu

Name of Participant: _____

I hereby give my permission to **Courtney Moore** to use any photos taken of myself during the **EAST CAMPUS LIBRARY INFORMATION RELAY** in which I participated on **September 9, 2013**. The purpose of the Information Relay was to improve students' abilities to independently access the library's resources and services. The photos will only be used for research purposes and for the presentation of the research. I may at any time withdraw permission for the photos of me to be used in this research project.

Signature: _____ Date: _____

FLO 1 Artifact 6

Part 2: Post – Survey

Now that you have completed the Info Relay, please respond to the following questions.

1. Using a scale of 1 to 10, indicate how much of the following statements are true to you.

Least True ——————————————→ Most True

I am able to find items in the library without asking for help.	1 2 3 4 5 6 7 8 9 10
I know how to use a call number to locate an item in the library.	1 2 3 4 5 6 7 8 9 10
I understand the differences between a Reference item and a Circulation item.	1 2 3 4 5 6 7 8 9 10
I know how to use the library catalog.	1 2 3 4 5 6 7 8 9 10
If someone asked me what services East Library offered, I would be able to tell them.	1 2 3 4 5 6 7 8 9 10

2. Comments or suggestions

_____

_____

_____

_____

_____

_____

FLO 1 Artifact 7
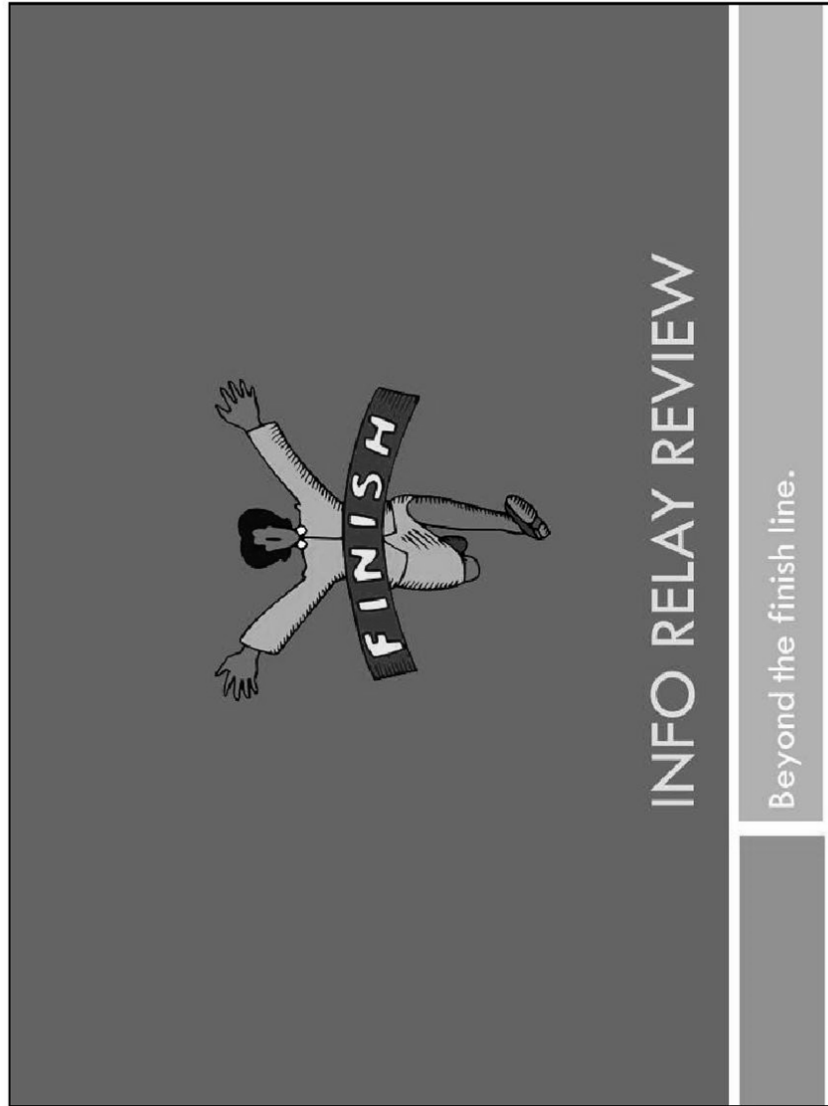
FLO 1 Artifact 7

Clue #1

You're hired! The book series ***Careers in Focus/Career Information Center*** includes valuable information that gives you an insider's look on many different career paths. Locate one of the many books in this series and take a picture of the model with it.

FLO 1 Artifact 7

FLO 1 Artifact 7

Clue #2

What is the call number for the book *10 things employers want you to learn in college, revised: the skills you need to succeed/Active interviewing: branding, selling, and presenting yourself to win your next job?*

FLO 1 Artifact 7

Clue #2 Answer

Call number HF 5549.16

10 things employers want you to learn In college, revised : the skills you need to succeed (LC1037.5.C68 2012)

FLO 1 Artifact 7

Clue #3

Locate the book with the call number **REF LB2338.S347 2013/REF L 901.P447 2013** and take a picture of the model holding the book while giving the peace sign.

FLO 1 Artifact 7
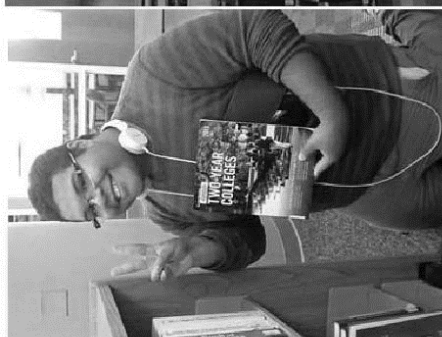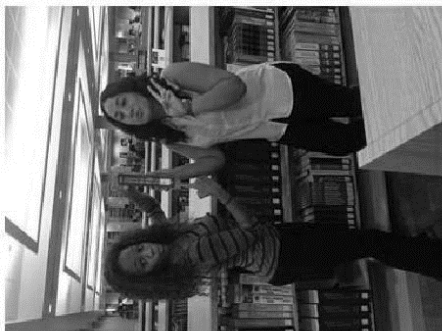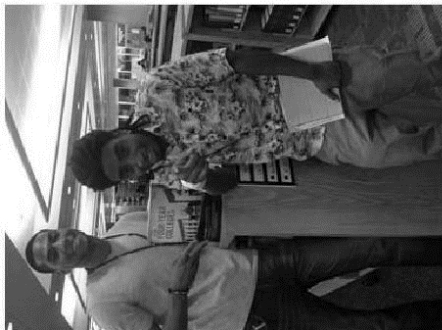
FLO 1 Artifact 7

Clue #4

Stuart Woods/Fern Michaels is just one of the bestselling authors in our **Leisure Reading Collection.** Locate one of his books and take a picture of the model holding it like a trophy.

FLO 1 Artifact 7

FLO 1 Artifact 7

Clue #5

In order to print or make a copy, you need a copy card. Find the machine where you can purchase a copy card and take a picture of the model giving it a round of applause.

FLO 1 Artifact 7

FLO 1 Artifact 7

Clue #6

Our **Matador Tips** handouts suggest databases you can use for classes like English Composition, Speech, and Humanities. Find the Matador Tips handout for **Speech/English** and take a picture of the model with it.

FLO 1 Artifact 7

FLO 1 Artifact 7

Clue #7

Our reference collection, which is for in-library use only, is a treasure trove of information on a variety of subjects. Find the 2013 edition of the *Book of Majors/Career Information Center* and take a picture of the model giving it a thumbs up.

FLO 1 Artifact 7

Clue #7 Answer

FLO 1 Artifact 7

Clue #8

Take a picture of the model pointing to the sign posted outside a study room that tells you how long you can check one out and how many people can use it at one time.

FLO 1 Artifact 7

Clue #8 Answer

4-201D

STUDY ROOM D

2 HOUR CHECK OUT
5 PEOPLE MAXIMUM

CHECK OUT
THIS ROOM AT THE
CIRCULATION DESK

FLO 1 Artifact 7

Clue #9

Take a picture of the model in front of the sign that gives the row number for the book *Best Resumes for College Students and New Grads/The 7 Habits of Highly Effective Teens.*
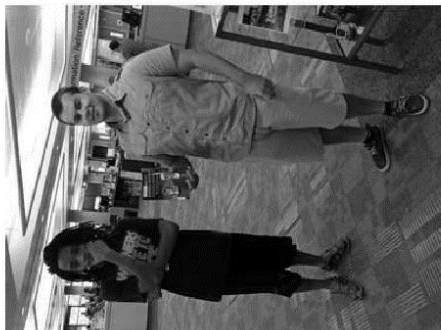
FLO 1 Artifact 7
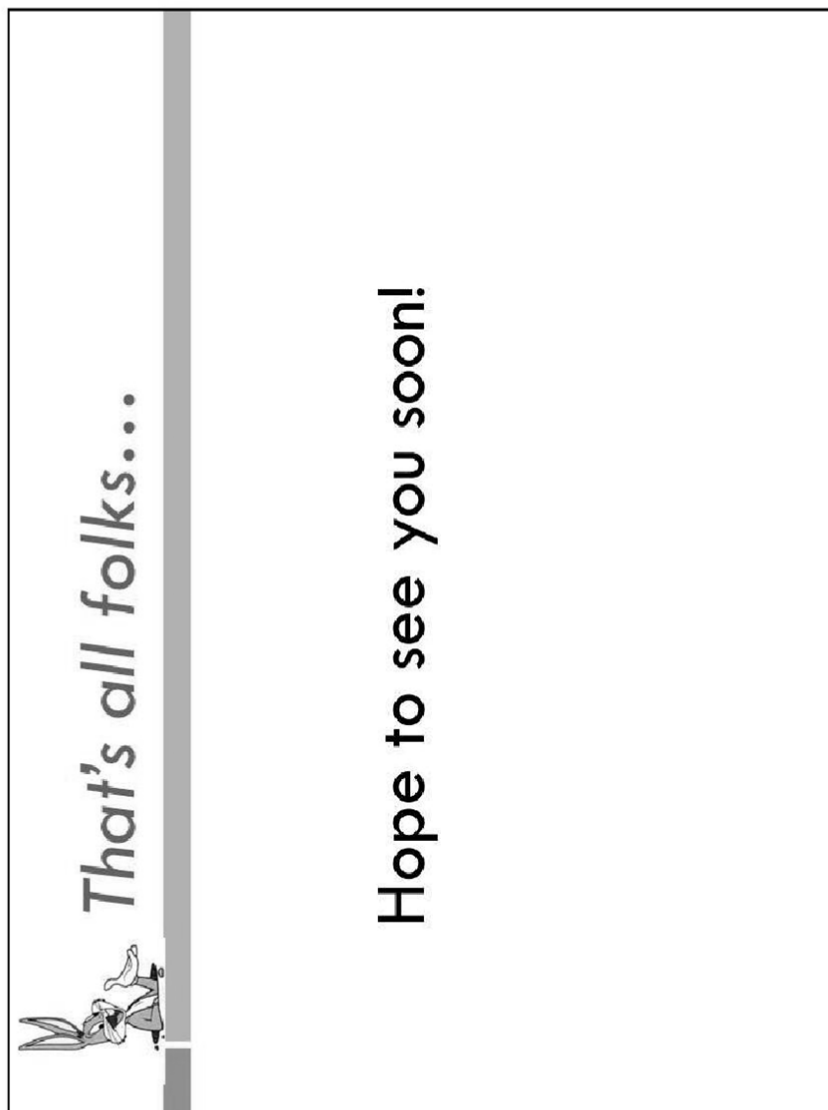

Clue #9 Answer

FLO 1 Artifact 7

Clue #10

The library has book displays that feature monthly themes and programs. Locate the display that has the book *American Zombie Gothic/Creatures of the Night*. Take a picture of the model with the display.

FLO 1 Artifact 7

FLO 1 Artifact 7

That's all folks...

Hope to see you soon!

East Library Info Relay
Pre – Survey

Before completing the Info Relay, please answer the following questions.

1. I am able to find items in the library without asking for help.
   A. Strongly Agree
   B. Agree
   C. Disagree
   D. Strongly Disagree
   E. Don't Know

2. I know how to use a call number to locate an item in the library.
   A. Strongly Agree
   B. Agree
   C. Disagree
   D. Strongly Disagree
   E. Don't Know

3. I understand the differences between a Reference item and a Circulation item.
   A. Strongly Agree
   B. Agree
   C. Disagree
   D. Strongly Disagree
   E. Don't Know

4. I know how to use the library catalog.
   A. Strongly Agree
   B. Agree
   C. Disagree
   D. Strongly Disagree
   E. Don't Know

5. If someone asked me what services East Library offered, I would be able to tell them.
   A. Strongly Agree
   B. Agree
   C. Disagree
   D. Strongly Disagree
   E. Don't Know

East Library Info Relay
Post Survey

Now that you have completed the Info Relay, please answer the following questions.

1. I am able to find items in the library without asking for help.
   A. Strongly Agree
   B. Agree
   C. Disagree
   D. Strongly Disagree
   E. Don't Know

2. I know how to use a call number to locate an item in the library.
   A. Strongly Agree
   B. Agree
   C. Disagree
   D. Strongly Disagree
   E. Don't Know

3. I understand the differences between a Reference item and a Circulation item.
   A. Strongly Agree
   B. Agree
   C. Disagree
   D. Strongly Disagree
   E. Don't Know

4. I know how to use the library catalog.
   A. Strongly Agree
   B. Agree
   C. Disagree
   D. Strongly Disagree
   E. Don't Know

5. If someone asked me what services East Library offered, I would be able to tell them.
   A. Strongly Agree
   B. Agree
   C. Disagree
   D. Strongly Disagree
   E. Don't Know

FLO 1 Artifact 9

6. The Info Relay helped me learn more about the library.
    A. Strongly Agree
    B. Agree
    C. Disagree
    D. Strongly Disagree
    E. Don't Know

7. What have you learned or gained (if anything) from the Info Relay activity?

_____

_____

_____

_____

_____

_____