Driving Google
Psychology 409a Google Instruction Unit
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Purpose & Goals

The Google Platform offers a wide variety of functions for gathering diverse resources. PSY 409a students will be able to use Google effectively for research and successful completion of Report One. After the session, students will be able to identify and apply advanced Google functions to capture results relevant to their information needs. In this one-time, 60 minute session we hoped to introduce students to Google’s advanced search limiters (e.g. file type). Students will then identify and experiment with a variety of advanced search features using three Google applications (Google Books, Google News, and Google Scholar).

Needs Assessment

In the preliminary needs assessment questionnaires, students were asked two multiple choice questions of which correct responses were assigned: one open-ended question, and one likert scale question.

The first multiple choice question asked students to select the best search string to find a newspaper article about speeding laws in Georgia using Google News. Sixty percent of students selected the keyword string [speeding laws Georgia], thirty-three percent selected the phrase search with the standard abbreviation for ga ["speeding laws" in ga], while seven percent chose the correct response [speeding laws location:ga]. In conclusion, these results indicated that at least ninety-three percent (93%) of students are unaware of Google's geographic limiter.

The second multiple choice question asked students to select the correct process for searching full text magazine articles published in 1985 on the topic of speed limits. Eighty percent (80%) of students selected the correct process [visit advanced search; type in search box: speed limits; set publication limit to January 1985 to December 1985; select magazine content and full view only]. Thirteen percent (13%) chose the following search query: [type in search box: speed limits full view magazine 1985], while seven percent (7%) thought [type in search box: "speed limits" 1985 in magazine] was the correct answer.

These results indicated that at least twenty percent (20%) of students are completely unfamiliar with Google's search limiters and/or how to effectively carry out a faceted search. Through the two multiple choice questions, it seemed clear that the Psychology 409a students expected to find relevant results by stringing content descriptors (e.g. speed limits) and desired meta attributes (e.g. full text) together as a Google keyword search.
Results of the short answer question were varied. Students were asked to write a search strategy for finding a recent court opinion from the state of Texas involving speeding accidents. Only one student identified Google Scholar as the logical search application for this content type (court opinion). Another student also identified Google News as a possible source for articles regarding court opinions. Only one student directly referenced the advanced search tool, "Visit advanced search; set the date for the last couple months, type in "speeding laws" in texas." The majority of students limited their responses to specific search queries (i.e. "Texas Speeding Accidents Courts" and Texas AND court opinion AND speeding accidents). While this question did not have a "correct" answer it is clear that most students, at the time of this assessment, were unaware of Google Scholar and advanced search options particular to this application.

The likert scale question yielded interesting results. Students were asked to rate the "helpfulness" of nine different limiters in Google's advanced search. The limiters selected were: All, Exact, or One or More fields; Language; File type; Site/domain limits; Date limits; Region limits; Keyword; Special search symbol/functions (i.e. +, -, etc.); and Language tools.

Fifty-three percent (53%) of students found "Keyword" to be the "totally helpful," followed by "Language" (40%), and "All, Exact, or One or More fields" (33%). "File Type," "Special search symbol/functions," and "Language tools" were perceived as "totally helpful" to twenty-seven percent (27%) of students. These results not only prove familiarity with some advanced search features, but also student receptivity to using limiters to create successful searches.

The results of the needs assessment also yielded information about student research habits. When asked where they look for information related to school, ninety-four percent (94%) of students selected Google as their first choice. This is a good indication that a majority of students would be motivated to refine their Google search skills and be receptive to learning more about Google's search suite (e.g. Google News, Google Books).

The data also indicated that a majority of students (63%) were most concerned with "integrating information into [their] paper/topic (citation, paraphrasing, direct quotation, etc.) while only a minority (30%) were interested in finding relevant information. This result hints that students not only need to build bibliographies, but also find primary sources (for direct quotation) and/or authoritative sources. A more in-depth line of questioning would reveal more conclusive evidence.

Our instructional unit was allotted a single 60 minute session, therefore our first task was to narrow down the number of Google platforms and select the specific aspects of
each platform we would teach. Selecting the contents of the instructional unit (specific aspects) proceeded in tandem with selecting and developing our ACRL performance indicators and ACS outcomes, as the specific formulation of the outcomes needed to indicate the specific content of the unit.

Given the variety of Google advanced search options, even after narrowing our focus to Google Books, Web, News, and Scholar, our unit content consisted of many small components. We integrated these into broader search exercises, though our outcomes and measures reflect the variety and detail of this content.

Each member of the instructional team was responsible for the content, and therefore the associated outcomes and measures, of a particular platform. We used two different formulations for our ACS outcomes. As long as the relationship between a particular outcome and its measure is consistent we see no problem with using multiple outcome formulations.

Following is an outline of our chosen outcomes organized hierarchically by ACRL performance indicators. Specific outcomes reflect the ACS Taxonomy of, and levels within, each domain (affective, cognitive, sensorimotor). In most cases ACS outcomes are located within a SAOAC Integrated Learning Objective. Each outcome is keyed to a specific worksheet question, given in brackets. The outline begins with our overall instructional goal.

**Working with the ACRL Standards**

**INSTRUCTIONAL GOAL**

The Google Platform offers a wide variety of functions for gathering diverse resources. PSY 409a students will be able to use Google effectively for research and successful completion of Report One. After the session, students will be able to identify and apply advanced Google functions to capture results relevant to their information needs.

**ACRL Standard 1**
The information literate student determines the nature and extent of the information needed.

**ACRL Performance Indicator 1.3**
The information literate student considers the costs and benefits of acquiring the needed information.
ACRL Outcome 1.3.1
Determines the availability of needed information and makes decisions on broadening the information seeking process beyond local resources (e.g. interlibrary loan; using resources at other locations; obtaining images, videos, text, or sound)

SPIO 1.3.1: SAOAC Integrated Learning Objective
When students show awareness of the variety of information resources available they will learn to distinguish which of those resources are accessible locally and/or online by scanning and searching both UHM licensed resources and Google.

ACS Outcomes

a) Given a title, students will conduct a search in Google Books and Voyager, and find the UHM call number. Verified on worksheet. (ACS Taxonomy: S1) [Books ex. #6]

b) Given a poll question, students will show awareness of UH Voyager as the next best, free option for obtaining full text items unavailable through Google Books with 80% accuracy. (ACS Taxonomy: C2) [Turning Point Q. #9]

ACRL Standard 2
The information literate student accesses needed information effectively and efficiently.

ACRL Performance Indicator 2.1
The information literate student selects the most appropriate investigative methods or information retrieval systems for accessing the needed information.

ACRL Outcome 2.1.3
Investigates the scope, content, and organization of information retrieval systems

SPIO 2.1.3: SAOAC Integrated Learning Objective
When students explore the Google Platform they will be able to evaluate the various content types available and pair those with the correct Google applications.

ACS Outcomes
a) Given a poll question, students will correctly match the Google application to the content type provided (i.e. Google Books>magazines) with 80% accuracy. (ACS Taxonomy: S1) [Turning Point Q #8]

b) Given a search exercise in Google News, students will explore the interface and record three categories of news on their handout. Verified on worksheet. (ACS Taxonomy: S1) [News ex. #1]

c) Given a search exercise in Google Books, students will explore the interface and record three subject categories on their handout. Verified on worksheet. (ACS Taxonomy: S1) [Books ex. #1]

ACRL Outcome 2.1.4
D) Selects efficient and effective approaches for accessing the information needed from the investigative method or information retrieval system

SPIO 2.1.4: SAOAC Integrated Learning Objective
When students are aware of Google’s advanced options they will be able to analyze the advanced functions and apply those options to limit their search results by file type, site, region, and/or content type.

ACS Outcomes

a) Given a keyword, students will limit their Google Advanced search by file type and cite one result on their handout. Instructors will collect handouts. (ACS Taxonomy: S1) [Web ex. #2]

b) Given a keyword, students will limit their Google News search by news agency and cite one result on their handout. Instructors will collect handouts. (ACS Taxonomy: S1) [News ex. #4]

c) Given a keyword, students will limit their Google Book search to 'Full View' and cite one result on their handout. Instructors will collect handouts. (ACS Taxonomy: S1) [Books ex. #5]

d) Given a rating scale, students will be asked to indicate their perceived confidence level in navigating Google Web’s advanced search options on their handout. Instructors will collect handouts. (ACS Taxonomy: A3) [Web ex. #5]
e) Given a rating scale, students will be asked to indicate their perceived confidence level in navigating Google News’ advanced search options on their handout. Instructors will collect handouts. (ACS Taxonomy: A3) [News ex. #6]

f) Given a rating scale, students will indicate their confidence level in navigating Google Books’ advanced search options on their handout. Instructors will collect handouts. (ACS Taxonomy: A3) [Books ex. # 7]

i) Affective Outcome
Learners feel confident about retrieving court opinions using Google Scholar, as indicated by in-class survey data. (ACS Taxonomy: A1) [Turning Point Q #12]

ii) Cognitive Outcome
Learners recognize the specific fields and limits to select to retrieve court opinions using Google Scholar, as indicated by in-class survey data. (ACS Taxonomy: C1) [Turning Point Q #3]

iii) Sensorimotor Outcome
Given the task of retrieving a current court opinion from the state of California about aggressive driving, learners will select appropriate fields and limiters from within the Google Scholar Advanced search page to retrieve a (pre-selected) relevant item; instructors will verify the item for each student in class. (ACS Taxonomy: S1) [Scholar ex. #5]

ACRL Performance Indicator 2.2
The information literate student constructs and implements effectively-designed search strategies.

ACRL Outcome 2.2.3
Selects controlled vocabulary specific to the discipline or information retrieval source

SPIO 2.2.3: SAOAC Integrated Learning Objective
When students become familiar with browsing Google by subject, region, and/or collection they will integrate these modifiers into their search queries to gather the most relevant results.

ACS Outcomes
a) Given a search exercise, students will identify three subjects covered by Google Books, and record observations on their handout. Instructors will collect handouts. (ACS Taxonomy: C1) [Books ex. #1]

b) Given a search exercise, students will list three categories covered by Google News, and record observations on their handout. Instructors will collect handouts. (ACS Taxonomy: C1) [News ex. #1]

**ACRL Outcome 2.2.5**
Implements the search strategy in various information retrieval systems using different user interfaces and search engines, with different command languages, protocols, and search parameters

**SPIO 2.2.5: SAOAC Integrated Learning Objective**
When students are receptive to navigating the advanced search options in Google News, Google Books, and Google Scholar they will be able to differentiate which options are unique to each application and modify their search strategy accordingly.

**ACS Outcomes**

a) Given a rating scale, students will indicate their perceived confidence level in navigating Google's advanced search options on their handout. Instructors will collect handouts. (ACS Taxonomy: A3) [Web ex. #5]

**ACRL Performance Indicator 2.4**
The information literate student refines the search strategy if necessary.

**ACRL Outcome 2.4.1**
Assesses the quantity, quality, and relevance of the search results to determine whether alternative information retrieval systems or investigative methods should be utilized.

**SPIO 2.4.1: SAOAC Integrated Learning Objective**
When students perceive the importance of quality versus quantity they will analyze the relevancy of their result sets and reformulate or amend their search queries as necessary.
ACS Outcomes

a) Given a Google Book search exercise, students will first perform a basic keyword search, then limit their search to "full view" and finally to "Magazines" and record the number of results for each search. Instructors will collect handouts. (ACS Taxonomy: S1) [Books ex. #2-4]

ACRL Outcome 2.4.3
Repeats the search using the revised strategy as necessary

SPIO 2.4.3: SAOAC Integrated Learning Objective
When students are willing to perform multiple searches they will choose relevant search limiters and experiment with different search terms.

ACS Outcomes

a) Given a failed search exercise ("court opinion") in Google Scholar, students will revise their search strategy to retrieve a preselected result. Instructors will verify the result. (ACS Taxonomy: C2) [Scholar ex. #3]

b) Given a Google Scholar search exercise, students will select the appropriate limiters (i.e. court opinions, California, within "last year") and retrieve a result. Instructors will verify the result. (ACS Taxonomy: S1) [Scholar ex. #5]  {Note that this is an alternate formulation of 2.1.4.iii above.}

ACRL Performance Indicator 2.5
The information literate student extracts, records, and manages the information and its sources.

ACRL Outcome 2.5.4
Records all pertinent citation information for future reference

SPIO 2.5.4: SAOAC Integrated Learning Objective
When students are attentive to citing the resources they find online they will plan to record or trace this information for future use.

ACS Outcomes
a) Given a Google News search result, students will provide title and source on their handout. Instructors will collect handouts. (ACS Taxonomy: A1) [News ex. # 3]

b) Given a keyword, students will retrieve at least one relevant resource from Google News and Google Books and record the citation information for each on their handout. Instructors will collect handouts. (ACS Taxonomy: S1) [News ex. #3 or #4]

c) Given a Google Book search result, students will record the magazine article title, author, and date. Instructors will collect handouts. (ACS Taxonomy: A1) [Books ex. # 5]

d) Given a keyword, students will retrieve at least one relevant resource from Google News and Google Books and record the citation information for each on their handout. Instructors will collect handouts. (ACS Taxonomy: S1) [Books ex. #2 through #5]

e) Given a true/false poll question, 100% of students will show awareness of Google's citation tools (i.e. email a link). (ACS Taxonomy: S1) [Turning Point Q #10]

Students’ Skills

We assumed that the Psychology 409a students are very familiar with Google’s Basic Search but are unfamiliar with Google’s Advanced Search suite. While an average of forty-seven percent (47%) of students indicated that they "have not used" or "do not know" Google’s advanced search tools, still over half of students surveyed indicated some familiarity or use. Limiters most commonly used by students – regardless of perceived usefulness – were: keyword (73%), language (67%) and file type (54%).

We secondly assumed that the students are somewhat aware of Boolean search operators, truncation, and limiters but do not yet know how to use them correctly. When asked which search terms would find all the books on speeding, as well as those about accidents, eighty percent (80%) of students selected [speeding AND accidents]. Students were also asked to select the best search terms to find a newspaper article about speeding laws in Georgia using Google News. Zero percent (0%) of students selected speeding+laws OR Georgia – indicating at the very least a recognition of the function of
the OR operator in a search. This result is contradictory given the overwhelming failure of students (80%) to select the correct result of the search query [speeding AND accidents].

Despite this inconsistency, it was clear that students were more confident on how to narrowly define, or limit, a given search. Sixty percent (60%) of students selected the keyword string [speeding laws Georgia], while one student (7%) selected the string containing Google's geographic limiter [speeding laws location:ga].

Students were also asked how they would search for the full text version of a magazine article on speed limits published in 1985 using Google Books. 12 of 15 students (80%) selected the correct response [visit advanced search; type in search box: speed limits; set publication limit to January 1985 to December 1985; select magazine content and full view only]. This positive response indicates acceptance of limiters as tools to narrowly define a given search.

Finally we assumed that the students would have some familiarity with the Voyager catalog both as a product of their undergraduate work and the LIS 665-taught Voyager session (to be taught one week before the Google session).

**Instructional Sequence**

To complete our instructional unit, we used the following equipment:

1) MacBook Pro (with video pigtail connector) – Courtesy of Sean Thibadeaux.
   --Prepared audio clips from iTunes on the MacBook.
   --Turning Point software, with Assessment Questions pre-loaded.
   --Browser Tabs:
      YouTube video entitled “Dangerman & Road Rage;”
      Google Search Platforms.

2) Turning Point clickers (26), with the USB receiver.

3) Exercise handouts: Five (5) pages total – one sheet for each of the four segments, plus a “One Minute Writing” Exercise. These pages were color coded, and stapled.

The instructional sequence is as follows:

**Introduction**
Instructors will arrive early to gain access to the Crawford computer lab, set up the necessary technology, and greet students as they arrive. Time: 12:50 pm – 1:00 pm

While students are arriving, the instructors will play a vignette from DANGERMAN...On Road Rage (http://www.youtube.com/watch?v=9UIIWAYQgVg). Time: 1:04 pm - 1:09 pm

A. Google Web Advanced Exercise (9 minutes). Time: 1:10 pm - 1:19 pm

   Brief Introduction to Platform by Becca (1 minute)
   Worksheet (7 minutes)
   Circulation and "Mini-Instruction" throughout the exercises.

Questions & Transition. Time: 1:20 pm - 1:22 pm

   Vocal cue to warn students of upcoming transition 30-45 seconds for before end of sub-unit. Musical segue into next session by Kim (45 seconds long).

B. Google Scholar Exercise -- Court Opinion (9 minutes). Time: 1:23 pm - 1:32 pm

   Demo/Exercise by Sean (9 minutes)
   Circulation and "Mini-Instruction" throughout the exercise.

Questions & Transition. Time: 1:33 pm - 1:35 pm

   Vocal cue to warn students of upcoming transition 30-45 seconds for before end of sub-unit. Musical segue into next session by Kim (45 seconds long).

C. Google News Exercise (9 minutes). Time: 1:36 pm - 1:45 pm

   Introduction to Platform by Becca (1 minute)
   Worksheet (7 minutes)
   Circulation and "Mini-Instruction" throughout the exercises.

Question & Transition. Time: 1:46 pm - 1:48 pm

   Vocal cue to warn students of upcoming transition 30-45 seconds for before end of sub-unit. Musical segue into next session by Kim (45 seconds long).

D. Google Books Exercise (9 minutes). Time: 1:49 pm - 1:58 pm
Introduction to Platform by Kim (1 minute)
Worksheet (7 minutes)
~ This will incorporate the UH Library homepage -- Kim will ask students to find the call number, thus they will use Voyager.
Circulation and "Mini-Instruction" throughout the exercises.

Question & Transition. Time: 1:59 pm - 2:01 pm

Vocal cue to warn students of upcoming transition 30-45 seconds for before end of sub-unit. Musical segue into next session by Kim (45 seconds long).

Assessment

Affective Assessment on Handouts. Time: 2:01 pm - 2:03 pm

Writing Session: One minute writing exercise to measure Affective part of Outcomes: Advanced, Scholar, News & Books. Meanwhile, two instructors will circulate to distribute clickers. Time: 2:04 - 2:05 p.m.

Polling Session: 5-7 Questions. Instructors Becca and Sean will circulate to pick up papers, while Instructor Kim introduces students to Blog. Time: 2:05 pm - 2:09 pm

Blog

End with "Additional Resources" component. Optional. Time: 2:09 - 2:10

Explain that we have created a blog to upload further information and resources. Provide Students with URL: http://www.drivingoogle.wordpress.com/.

Total Estimated Time: 70 minutes. END 2:10 pm.

Handouts

All handouts, visual aids, and test items are included in Appendix A. Please see that section for further details.
Test / Exercise Response

1. SPIO 1.3.1 -- Given a poll question, students will show awareness of UH Voyager as the next best, free option for obtaining full text items unavailable through Google Books with 80% accuracy. ACS Taxonomy: Cognitive Level 2 [Turning Point Question #9]
   a. *Response:* Students should select University of Hawaii Voyager Catalog.

2. SPIO 2.1.3 – Given a search exercise, students will list three categories covered by Google News, and record observations on their handout. Instructors will collect handouts. ACS Taxonomy: Cognitive Level 1 [Google News exercise Question #1]
   a. *Response:* Answers will vary, but three examples include: Science & Technology, Top Stories, and Business.

3. SPIO 2.1.4 -- Given a keyword, students will limit their Google Advanced search by file type and cite one result on their handout. Instructors will collect handouts. ACS Taxonomy: Sensorimotor Level 1 [Google Web exercise Question #2]
   a. *Response:* Students should select the correct PDF file entitled “Driving with Confidence: a Practical Guide to Driving with Low Vision.”

4. SPIO 2.2.3 – Given a search exercise, students will identify three subjects covered by Google Books, and record observations on their handout. Instructors will collect handouts. ACS Taxonomy: Cognitive Level 1 [Google Books exercise Question #1]
   a. *Response:* Answers will vary, but three examples include: Cooking, Games and Humor.

5. SPIO 2.2.5 – Given a rating scale, students will indicate their perceived confidence level in navigating Google’s advanced search options on their handout. Instructors will collect handouts. ACS Taxonomy: Affective Level 3 [Google Web exercise Question #5]
   a. *Response:* Answers will vary. Students will rate their ability to navigate Advanced Google from 1 (Not Confident at All) to 5 (Very Confident).

6. SPIO 2.4.1 – Given a Google Book search exercise, students will first perform a basic keyword search, then limit their search to "full view" and finally to "Magazines" and record the number of results for each search. Instructors will collect handouts. ACS Taxonomy: Sensorimotor Level 1 [Google Books exercise Question(s) #2-4]
a. **Response**: Answers will depend upon keyword selected, but one example retrieves the following results: “Road rage” + magazines + Full View Only = 255 results.

7. SPIO 2.4.3 – Given a failed search exercise ("court opinion") in Google Scholar, students will revise their search strategy to retrieve a preselected result. Instructors will verify the result. ACS Taxonomy: Cognitive Level 2 [Google Scholar exercise Question #3]

   a. **Response**: Students should provide some variation of the following statement: “All of these documents are court opinions. The limiter searches types of documents.”

8. SPIO 2.5.4 – Given a Google News search result, students will provide title and source on their handout. Instructors will collect handouts. ACS Taxonomy: Affective Level 1 [Google News exercise Question #3]

   a. **Response**: Answers will vary, but instructors will circulate and confirm the appropriateness of the response. One example: Pyatt, Jamie. *The Sun*. “The Posh Guide to Road Manners.”

**Learner’s Session Evaluation**

To evaluate the success of the Driving Google instructional session, we employed several assessment tools: student worksheets; an affective writing query; and Turning Point post-session clicker questions. The first set of data came from the worksheets that the students filled out during the session. Four of the five pages corresponded with the platforms we taught during the session: Google Advanced, Scholar, News, and Books. Each worksheet had a sum of four to six questions, designed to engage the students in affective, sensorimotor, or cognitive learning. Inputting and rating the data will take more time, and can be found in our subsequent Outcomes Assessment Report.

In addition to the four Google Platform worksheets, we included an overtly affective assessment measure. For this tool, we provided a one minute writing exercise was intended to measure the affective sense of the learners skills as a result of the instruction. The directions were meant to generate open ended responses. The data will take additional time to interpret qualitatively. However, the data may be quantified by grading each response on a scale of 1 to 3, 3 being indicating confidence or a generally positive affective state. The affective query is stated thus:

“Please take a minute to write down how you feel about your Google searching skills after having participated in this instructional session.”
On the spreadsheet unequivocal terminology expressing affective states is **bolded**. Other language of a generally positive nature is ranked with "3" in brackets. 12 of 16 responses (75%) received a positive rating. The 3rd through 5th columns of the spreadsheet record the responses to questions at the end of the Advanced, News, and Books worksheets, asking students to rate their confidence level on a scale from 1 to 5, 5 being the most confident.

The number of maximum confidence scores for each worksheet are as follows:

- Googel Advanced highest confidence (5): 8/17 (47%)
- Googel News highest confidence (5): 7/17 (41%)
- Googel Books highest confidence (5): 9/17 (53%)

- Googel Advanced high confidence (4 or 5): 14/17 (82%)
- Googel News high confidence (4 or 5): 15/17 (88%)
- Googel Books high confidence (4 or 5): 15/17 (88%)

The final source of data – the Turning Point clicker questions – is self evident. Please note that due to the inconsistent performance of the clickers there are fewer responses than the total class size (17). The rating of 76% for Google Scholar is consistent with the worksheet data, given the inconsistent technology and that the Turning Point measures employed a 3 point rather than a 5 point scale.

The Turning Point data indicates one or two negative responses. We might surmise that these correlate to the two negative responses given in the Writing Exercise data, and that the missing 2-4 Turning Point responses would have been positive; but this is purely conjecture.
Memo to Administration

One of the hallmarks of scholarly dialogue throughout the world is the ability to analyze information through critical examination. Without the capacity to evaluate data, true scholarship ceases and the mundane recycling of concepts commences. Consequently, information literacy – which is proficiency in assessing print, audio-visual, and electronic materials – is crucial for any educational institution.

The University of Hawai‘i supports teaching undergraduates the value of information literacy. Indeed, the University of Hawai‘i has established such a goal through its Foundation Hallmarks. The Written Communications component states “[A course will]... help students develop information literacy by teaching search strategies, critical evaluation of information and sources, and effective selection of information for specific purposes and audiences.” All of these objectives are found throughout the Google Instruction Unit we prepared for undergraduates. Students were instructed to conduct search strategies, and to critically evaluate their results. By employing these search exercises within the instructional session, students received an opportunity to develop the technical fluency necessary for scholarly discourse in a supportive environment.

Furthermore, the Google Instructional Unit incorporates the University of Hawai‘i Strategic Vision by “[Engaging]...undergraduates in research and creative scholarship.” We designed the workshop to be an accessible, yet challenging, examination of Google Search Platforms. Once students have completed this course, they can apply this new skill set to their current educational goals and future career endeavors.

The Google Instruction Unit was a success, as demonstrated by the assessment results. Students, upon providing a self-evaluation, stated that they felt more confident about searching through the multiple Google Search interfaces. Now, imagine if all undergraduates had access to this workshop. Students, empowered through their information literacy skills, could truly engage with their course materials. Consequently, the University of Hawai‘i would profit from the increased level of scholarship while fulfilling established goals written in the Foundation Hallmarks and Strategic Vision. Such an opportunity makes a strong case for the continuance of the Google Instruction Unit.
Appendix A

Handouts & Answer Key

**Google Advanced Web:**

1) Explore the search interface, and examine the options (also called ‘limiters’). One example is the ‘Results per Page’ limiter. Name three other search options.

   Answer: You can search by language, file type, or domain type.

2) Conduct a search with the term “Driving Controversy,” and select .PDF as the **File Type**. Provide the title of the first result.


3) Enter the search term “road rage,” and type .gov in the **Search within a Site or Domain** box. What happens? Who authors these websites? List one example.

   Answer: “Aggressive Driving/Road Rage – Washington State Patrol.” These sites are authored by the federal, state or local governmental organizations.

4) Experiment with the domain types. Conduct a search with .edu. What websites end with the domain type .edu? List one example.

   Answer: “Understanding Road Rage,” provided by New York University. Websites that end in .edu are educational sites.

5) After completing this exercise are you confident that you can search for different domain types (i.e., .gov) within **Google Advanced**? Rate your confidence level.

   ![Confidence Level](image)

   (Not at all confident) (Somewhat confident) (Very confident)

   Answer: Student responses will vary.

**Google News Unit:**

1) Explore the homepage first. List three categories of news. (Hint: You will find these categories on the left side of the page).
Answer: Answer will vary. One possible example: “Three types of categories are Entertainment, Sports, and Health.”

2) Find and list the two top stories from Botswana. Where do these results appear?

Answer: “Give us News – the Top Job of the Media,” provided by Mmegi Online, and “Teachers Most Underprivileged,” provided by the Botswana Gazette.

3) Go to Advanced News Search. Locate an article about “Road Rage” that was published sometime during the last day. Provide the citation.


4) Return to the Advanced News Search. Find a document about “Road Rage” published by the Los Angeles Times. Select the first result, and provide the citation.

Answer: Los Angeles Times. “Sheriff: California Man Kills motorist in an apparent road rage incident.”

5) Conduct a search on “Road Rage,” seeking a source from CNN. What happens? Now click on Google News Archives Search. Examine the tables, and explain how they are organized.

Answer: The tables demonstrate the frequency of publication for “road rage” articles throughout the last eighteen years.

6) After completing this exercise are you confident that you can limit your search by date (i.e., "Within the Last 24 Hours") using Google News? Rate your confidence level.

1 2 3 4 5
(Not at all confident) (Somewhat confident) (Very confident)

Answer: Student answers will vary.

Google Scholar Unit:

1) In the with the exact phrase search box (the second from the top) enter "road rage" AND "court opinion" and click Search Scholar. Click on some of the items. Are any of these court opinions?

Answer: One or two might be Court opinions, but mostly journal articles.
2) Why, when you search "court opinion" in the search box, does Google Scholar retrieve items which are NOT court opinions?

Answer: Google searches the words “Court Opinion” within the Document; it doesn’t necessarily search for those kinds of documents.

3) Return to the Google Scholar Advanced search page. Scroll down to the heading Legal opinions and journals; examine the various limits here. Select Search only US federal court opinions. Return to the top of the page and in the with the exact phrase search box enter "road rage" (do not enter "court opinion") and click Search Scholar. Click on some of the items. Are any of these court opinions? [ACRL 2.4.3; ACS a]

Answer: All of these are court opinions. The limiter searches types of documents.

4) Return to the Google Scholar Advanced search page. In the Legal opinions and journals section select the state of Texas. De-select any other states. Return to the top of the page and in the "with the exact phrase" search box enter "road rage" and click Search Scholar. From the results page is there a way to limit to only recent items? Limit you results to items "since 2009".

Answer: From the pull down menu entitled “Anytime,” and select “Since 2009.”

5) Retrieve a court opinion from the state of California about aggressive driving from within the last year. When you’ve got it raise your hand and show an instructor. [ACRL 2.1.4; ACS iii]

Answer: This search (currently) retrieves 5 items since 2009. Below is one of these items:

The People, Plaintiff and Respondent,

v.

Gonzalo Ibarra Pellegrin, Defendant and Appellant.

B201488

Court of Appeals of California, Second Appellate District, Division Three

April 16, 2009.

Google Books Unit:

1) Explore the home page. What subjects are covered? List three. (Hint: you will find a list on the left side of the page).

Answer: Answers will vary, but three examples include Cooking, Games, and Humor.
2) Do a search on the keywords *speeding accidents*, and scan the results. How many books/articles did you find?

   Answer: Students should (currently) find 2,730 results.

3) Limit your results to items that are **Full view only** (Hint: look on the left side of the page). How many books/articles did you find?

   Answer: Students should (currently) find 802 results.

4) Click on **Advanced Book Search** for more search options. Limit your content to **Magazines**. How many articles did you find?

   Answer: Students should (currently) find 612 results.

5) Scroll through the results and find an item that you would consider using in Report 1. Choose any entry and click on the link. Record the **author**, **title of the magazine**, and **date published**. Can you **email a link** to yourself?

   Answer: Student responses will vary, and instructors will confirm the successful e-mail task.

6) Start a new search (do not limit by full view or content type). Find the book *Autophobia: love and hate in the automotive age* by Brian Ladd (Hint: include author’s name in search). Can you view the full text of this book in Google Books? Can you distinguish whether this book is in the UHM library? (Hint: go to UH Voyager and do a keyword search). What is the **call number**?

   Answer: Students cannot view the entire content of the book at Google Books. The call number is

7) After completing this exercise are you confident that you can limit your search by content type (i.e. Magazine) and locate a full text item using **Google Books**? Rate your confidence level.

   1 2 3 4 5
   (Not at all confident) (Somewhat confident) (Very confident)
One Minute Writing Task:

Please take a minute to write down how you feel about your Google searching skills after having participated in this instructional session.

Answer: Answers will vary, and are subject to qualitative analysis.
Appendix B

Professor Leon James’ requirements for Report One. This document is necessary for understanding the Instructional Goals of the Driving Google Unit. Accessed 11 April, 2010. Instructions can be found at the following URL:

http://www.soc.hawaii.edu/leonj/leonj/leonpsy31/409a-g31-report1.htm

ACRL Standards. These standards guided our instructional design, and subsequent assessment measures. Accessed 11 April, 2010. The document can be found at the following URL:

http://www.alaprofessionalstandards.org/instructionalcompetency.cfm

ACS Outcomes, as well as the SAOAC (Situation, Ability, Object, Action, Constraints) framework, are taken from Dr. Diane Nahl’s Handouts for Lectures for LIS 665 at the University of Hawaii at Manoa, Spring 2010. Accessed 11 April, 2010. The document can be found at the following URL:


Driving Google Blog. Due to time constraints, we were unable to cover all Google Platforms required by Report One. However, we created a blog with further information, tutorials, and much more. Accessed 11 April, 2010. The URL is:

http://drivinggoogle.wordpress.com/

“Dangerman on Road Rage.” We used a short video at the beginning of our instructional session. Accessed 11 April, 2010. The video can be found at:

http://www.youtube.com/watch?v=9UIIWyQgkVg

Turning Point Clicker Questions and Student Responses. Document offers immediate data from the post-session, in-class queries. Accessed 11 April, 2010. Data can be found at:

Appendix C

Handout Questions & Corresponding Map to ACRL/ACS Measures

Google Advanced Web:

1) Explore the search interface, and examine the options (also called ‘limiters’). One example is the ‘Results per Page’ limiter. Name three other search options.

   -- SPIO: 2.1.3, 2.1.4

   -- ACS: Affective, Level One (See keyword "Explore"); Sensorimotor, Level One (See keyword "Names").

2) Conduct a search with the term “Driving Controversy,” and select .PDF as the File Type. Provide the title of the first result.

   -- SPIO: 2.1.4, 2.2.5

   -- ACS: Affective, Level One (See keyword "Select").

3) Enter the search term “road rage,” and type .gov in the Search within a Site or Domain box. What happens? Who authors these websites? List one example.

   -- SPIO: 2.4.1, 2.5.4

   -- ACS: Cognitive, Level One ("Decoding Information Displays"); Sensorimotor, Level One (See keyword "List").

4) Experiment with the domain types. Conduct a search with .edu. What websites end with the domain type .edu? List one example.

   -- SPIO: 2.2.5, 2.4.1

   -- ACS: Sensorimotor, Level One (See keyword "List"); Affective, Level One (By experimenting with the site, the patron "Accepts Information Structure").

Assessment Question:

5) After completing this exercise are you confident that you can search for different domain types (i.e., .gov) within Google Advanced? Rate your confidence level.
Google Scholar Unit:

1) Begin with the standard Google home page.

   From the drop down menu under "more" select Scholar.
   To the right of the search button click the Advanced Scholar Search link.
   In the "with the exact phrase" search box (the second from the top) enter "road rage"
   AND "court opinion" and click Search Scholar.

   1a) Click on some of the items. Are any of these court opinions?

   1b) Why, when you search "court opinion" in the search box, does Google retrieve items
      which are NOT court opinions?

      -- SPIO: 2.1.4c, 2.4.1

      -- ACS: Cognitive, Level One ("Decoding Information Displays"); Sensorimotor, Level
      One ("Recognizing Information Elements").

2) Return to the Google Scholar Advanced search page.

   Scroll down to the heading Legal opinions and journals; examine the various limits.
   Select "Search only US federal court opinions".
   Return to the top of the page and in the "with the exact phrase" search box enter "road
   rage" [don't enter "court opinion"] and click Search Scholar.

   2a) Click on some of the items. Are any of these court opinions?

      -- SPIO: 2.1.4c, 2.4.1

      -- ACS: Cognitive, Level One ("Decoding Information Displays").

3) Return to the Google Scholar Advanced search page.
In the **Legal opinions and journals** section select the state of **Texas**.
De-select any other states.
Return to the top of the page and in the "**with the exact phrase**" search box enter "**road rage**" and click **Search Scholar**.

3a) From the results page is there a way to limit to only recent items? Limit you results to items "**Since 2009**."

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ACS: Sensori-motor, Level One ("Recognizing Information Elements").

4) Now you're ready...

Retrieve a **court opinion** from the state of **California** about "**aggressive driving**" from within the **last year**. When you've got it raise your hand and show an instructor.

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ACS: Affective, Level One (By raising their hand, the student is demonstrating participation).

**Google News Unit:**

1) Explore the homepage first. List three categories of news. (Hint: You will find these categories on the left side of the page).

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ACS: Affective, Level One (See keyword "Explore").

2) Find and list the two top stories from Botswana. Where do these results appear?

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ACS: Sensorimotor, Level One (See keyword "List").

3) Go to **Advanced News Search**. Locate an article about “**Road Rage**” that was published sometime during the last day. Provide the citation.
4) Return to the **Advanced News Search**. Find a document about “Road Rage” published by the *Los Angeles Times*. Select the first result, and provide the citation.

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5) Conduct a search on “Road Rage,” seeking a source from CNN. What happens? Now click on **Google News Archives Search**. Examine the tables, and explain how are they organized.

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**Assessment Question**

6) After completing this exercise are you confident that you can limit your search by date (i.e., "Within the Last 24 Hours") using **Google News**? Rate your confidence level.

1 2 3 4 5
(Not at all confident) (Somewhat confident) (Very confident)

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**Google Books Unit:**

1) Explore the home page. What subjects are covered? List **three**. (Hint: you will find a list on the left side of the page).

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2) Do a search on the keywords *speeding accidents*, and scan the results. How many books/articles did you find?
3) Limit your results to items that are **Full view only** (Hint: look on the left side of the page). How many books/articles did you find?

   -- SPIO: 2.1.4, 2.4.3

   -- ACS: Sensorimotor, Level One ("Locating Information Elements").

4) Click on **Advanced Book Search** for more search options. Limit your content to **Magazines**. How many articles did you find?

   -- SPIO: 2.1.3, 2.2.5

   -- ACS: Cognitive, Level One (In this context, "Limit" is synonymous with "Revise").

5) Scroll through the results and find an item that you would consider using in Report 1. Choose any entry and click on the link. Record the **author**, **title of the magazine**, and **date published**. Can you **email a link** to yourself?

   -- SPIO: 2.4.1, 2.5.4

   -- ACS: Cognitive, Level One ("Decoding Information Displays").

6) Start a new search (do **not** limit by full view or content type). Find the book *Autophobia: love and hate in the automotive age* by Brian Ladd (Hint: include author's name in search). Can you view the full text of this book in Google Books? Can you distinguish whether this book is in the UHM library? (Hint: go to UH Voyager and do a keyword search). What is the **call number**?

   -- SPIO: 1.3.1

   -- ACS: Cognitive, Level One (See keyword "Distinguish").

**Assessment Question:**

7. After completing this exercise are you confident that you can limit your search by content type (i.e. Magazine) and locate a full text item using **Google Books**? Rate your confidence level.

   1    2    3    4    5

   (Not at all confident)    (Somewhat confident)    (Very confident)

   -- SPIO: 2.2.5
One Minute Writing Task:

One Minute Writing Task

Please take a minute to write down how you feel about your Google searching skills after having participated in this instructional session.

-- SPIO: 2.2.5
-- ACS: Affective, Level One.