Education Libraries, 40:1 (2017)

Research Article

You have one hour: developing a standardized library orientation and evaluating student learning

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Abstract

Library orientations continue to excite, or plague, instruction librarians everywhere. Reaching first year students early can preempt academic heartache and research woes, yet the question of "what students really need" continues to evolve. This article presents a case study of a large-scale implementation of library orientations. The main issue addressed in this article involves a systematic review of students' post-instruction responses and assessment of their learning. Related elements mentioned in this article include: interdepartmental participation; curriculum design; and instructional technology. While this implementation may not be appropriate for all academic libraries, its components may offer ideas for augmenting existing programs or building new ones.

Keywords: academic libraries, information literacy instruction, library orientation, assessment strategies

Introduction

Limited classroom time with students is a challenge for instruction librarians aiming to develop and deliver quality instruction. When it comes to orientations, their nature lends them to be both limited in time and lacking a deeper research mission. In turn, this means they can be a challenging entry point for library instruction. However, getting students in the library, or at least aware of the resources available to them, is an important element of getting students oriented to campus. This is the landscape in which library orientations exist and function. The scenario is no different at Central Washington University where this orientation took place.

During the fall quarter of 2015, the librarians of James E. Brooks Library partnered with University 101 (UNIV101), a required orientation course designed for first-year students. This was not the first implementation of UNIV101 partnerships, but the relationship pivoted on the expectation of standardized content coverage. The main mission behind this orientation was to introduce students to library materials and services. One of the goals was to establish familiarity with the library from which to build on in higher-level library instruction. A secondary goal of

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this implementation was to check for student learning after their library session. The course outcome that was targeted during library orientations is represented in Table 1.

Table 1
UNIV101 Library Outcome

UNIV101 Library Outcome	**How will the course satisfy this outcome?**	**How will this outcome be assessed (summative) and what is the measure of success?**
Illustrate basic understanding of CWU library information resources.	Students will participate in class group work, presentations, homework, and/or CANVAS modules developed in collaboration with and/or by professional library staff and/or a guided tour of the Brooks Library with a professional librarian.	Students will demonstrate mastery of CWU's library resources through quizzes, completion of CANVAS modules, and/or a cumulative final exam at the end of the course.

Given the flexible nature of this outcome, it was expanded to create clear expectations that the learner would be able to:

- Identify services, materials, and spaces available at the library
- Identify OneSearch [the library catalog] as a starting place for academic research
- Apply evaluative strategies to assessing resources and differentiate between scholarly and popular resources

In defining this outcome, it was important to keep in mind that students in this session were not expected to have had previous library experience or exposure. Therefore, it was necessary to assume that students in this course might have had little experience with research or the research process. They also would not have a research project that they are working on for a course. The premise of the orientation curriculum and all case-based learning activities were designed with this in mind and were self-contained.

Literature Review

Academic libraries are not new to the student orientation process and while library orientations take a variety of formats, most aim for a common goal of providing an introduction to libraries in a friendly fashion. Some orientation activities have included scavenger hunts, tours, and games (Kasowitz-Scheer, 2006) to engage their audience. Other orientations that occur in the traditional classroom have integrated clicker response questions into library orientation sessions (Brush, 2010) as an engagement method. Engagement is central to effective orientations and student learning. As a teaching strategy, it can also take a variety of forms.

Cooperative learning, active learning, and problem-based learning all circle back to the goal of creating engaging learning experiences. Cooperative learning has its roots in active learning, but distinguishes itself by maximizing learning through group work (Keyser, 2000) instead of simply active individual work. As a teaching model, case-based or problem-based

learning also draws on individual interests and input to offer an effective learning environment (Carder, Patricia, & David, 2001). With the knowledge that students are also more likely to value instruction that they feel has personal relevance to their learning (Latham, Gross, 2013), adopting problem-based and active learning models can be an effective way to engage students. Orientations pose a challenge because students coming to the library for an orientation are unlikely to have an existing research mission or interest, and may not be as invested in the learning process. One way to counter this is to create realistic research scenarios for the student to connect to and engage with.

Orientations and activities can be delivered in-person or online, and the effectiveness of both have been examined in numerous studies. However, a clear determination on the most effective method remains elusive. In a meta-analysis examining consistency in effectiveness of computer-assisted instruction versus face-to-face learning, Zhang, Watson, and Banfield (2007) found the results to be inconclusive of one mode being superior. In one of their comparisons however, they found students were more satisfied with face-to-face instruction, but more confident after computer-assisted instruction—suggesting that a blend of in-person and online can be an effective approach to library instruction. In work by Kraemer, Lombardo, and Lepkowiski (2007), after implementing in-person, online only, and hybrid instruction, students were found to perform better on a library posttest regardless of medium. From this, one could conclude that library instruction in any form is better than no instruction at all.

However, designing instruction that is valued by students also requires they have identified library resources or knowledge as a need. Research by Gross and Latham indicate that some students are able to identify gaps in information literacy knowledge, but that students who struggle with information literacy concepts were more likely to overestimate their skills (2007; 2011). Access to the Internet may also play into assumed knowledge and in a series of studies, Fisher, Goddu, and Keil found that individuals consistently over-estimated their knowledge in instances where they had access to the Internet (2015). Being able to instantly access information on the Internet suggests a trend toward transactive memory and a false sense of personal knowledge. In order to counter this, information literacy instruction should create content relevant to students in order to engage their interest, and also help students reflect on their learning process to identify gaps in knowledge.

While students may hold a false sense of their ability to navigate the library, library welcomes and orientations still hold a tangible benefit to students. For one of the library welcome events examined by Kasowitz-Scheer, "94% of students who attended . . . [felt] more comfortable using the library for research assignments" (2006). Regardless of whether students believe they need a library orientation or not, they are likely to benefit from one, which can help introduce new resources, develop information strategies, and introduce friendly librarians.

Library orientations present an opportunity to level the playing field for incoming students by providing them a chance to engage with the resources available to them. They also present a challenge in learning design to create material that is standardized, fun and approachable, and academically earnest.

Method

Curriculum Development

Development of curriculum for the library component began in the spring of 2015. Identifying essential content worth including in the hour-long lesson was a challenge and the initial version was far too ambitious in content coverage. Lesson objectives were based on struggle points observed during other library instruction in 100 and 200 level classes. Three librarians partnered with two advisors to pilot the new curriculum in two UNIV101 courses. After the trial, the involved advisors and librarians reconvened to review and revise. The ultimate lesson plan focused on helping students distinguish between popular and scholarly sources, use of the library search engine, and practice applying the CRAAP test to resources through an in-class worksheet. The worksheet provided students with a scenario in which they would need to identify keywords in order to find credible sources using the library search engine (see Appendix A for worksheet). These focus areas for the lesson plan were identified as fitting within the Authority Is Constructed and Contextual, and Searching as Strategic frames of the ACRL Framework (ACRL, 2016). Although Framework terminology was not yet confirmed by the ACRL task force during the conception of this curriculum, conversations about mapping to the Framework took place early in the process.

The initial implementation of the standardized library component for UNIV101 was during the fall of 2015. The actual library component was made up of two parts, an online component and an in-person session with a learning activity. Online content included a Canvas module with a pre-quiz, library introduction video, and post quiz. The Canvas learning management system was the standard online system in place at CWU and used by all UNIV101 courses. It was a natural fit to use for collecting pre and post quiz results. At its full scale, the in-person sessions were taught by 11 librarians sharing the instruction load, but all following the same standard lesson plan.

Getting Everyone on Board

Before delivering a standardized curriculum for the library sessions, there were a number of stakeholders that needed a basic understanding of the moving parts in order for everything to work. The main players included: librarians, section instructors, and the Director of Academic Advising who oversees University 101 and its involvement with other departments on campus. As part of an existing training for University 101 instructors, the Instruction Coordinator from the library conducted an orientation for as many of the session instructors as possible and served as the main contact for questions and coordination of the library component. This included reviewing the library component learning outcomes, instruction on how to add the appropriate librarian to their Canvas courses, scheduling library sessions, and an overview of day-of session activities. Orientation training for the 11 librarians was slightly more involved and covered additional details on navigating the online Canvas content, delivering the lesson plan, and facilitating the in-class activity.

Delivery

In preparation for the many standard library sessions to take place throughout the fall quarter, a copy of the lesson plan and a stack of worksheets for the in-class activity were placed at the instructor's station in the library classrooms. All librarians co-taught with another librarian during their first session to have extra help while they were getting familiar with the lesson plan.

Results

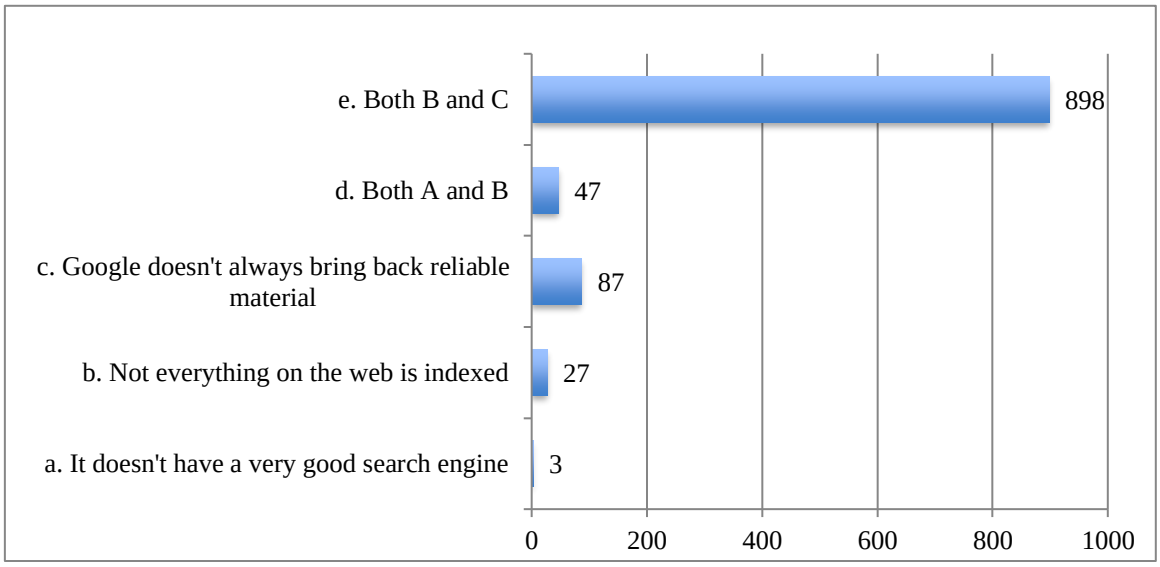
The pilot sessions that took place in the spring prompted revisions to the lesson plan, libguide, and online pre and post quizzes. Working closely with a few individuals from Academic Advising and running a pilot allowed for review of the lesson plan and quizzes for appropriateness and difficulty, but most importantly, built trust in library material. Actively reaching out to University 101 instructors, communicating that the library wanted to partner on instruction, and presenting a clear lesson plan with learning objectives, activities, and assessment was critical to building trust.

Communicating the library as friendly and approachable to students meant demonstrating a variety of platforms on which to find library materials. The lesson required students to engage with different technology tools, including engaging with video and online quizzes in Canvas, and responding to a poll about popular and scholarly sources in libguides during the in-class session. Being able to view poll results in real-time was popular among students and succeeded in generating class discussion on what constitutes popular or scholarly material.

Although UNIV101 courses were taught throughout the academic year, the majority were delivered in fall quarter; the results of postquizes that occurred in the fall were collected and analyzed to make improvements for next year. The data presented in the results represents responses from 1,062 students. While 54 sections of UNIV101 were taught in the fall, data from the postquiz was examined from only 32 sections and some instructors didn't require their students take the postquiz.

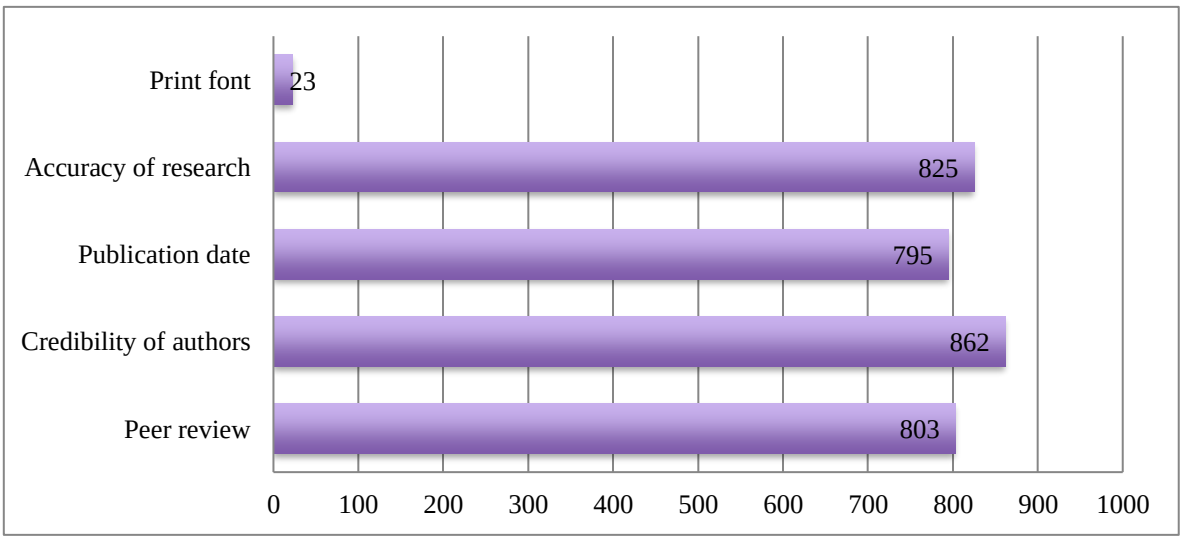
Postquizzes included six questions, five of which were multiple choice or multiple answer. The last question was a short response to the question, "What was the most interesting or significant thing you gained from this session?". Results from the last question are not discussed in this study. Quizzes were untimed and administered via Canvas (the campus LMS) after a library session; deadlines were set by individual UNIV101 instructors. Results from the postquiz were downloaded from Canvas at the end of the fall quarter by each of the librarians embedded in their sections. Data was compiled and analyzed to draw conclusions about student comprehension of the material presented. The results of the postquiz are presented here with the questions students were asked, followed by a short summary of what could be concluded.

Table 2
Question 1: Why can't we find everything we need for research by using Google?



When it comes to Google, the majority of students understood that "e." was the most appropriate response. A take-home message from this question was that Google isn't necessarily an ineffective search engine, but that it isn't always the best option for finding scholarly material. The fact that 47 individuals still selected "d." indicates that there may still be some confusion on the role of a search engine. Based on student responses from other library sessions and one-on-one consultations with students, this is not surprising and confirms that an understanding of what search engines do, should not be assumed.

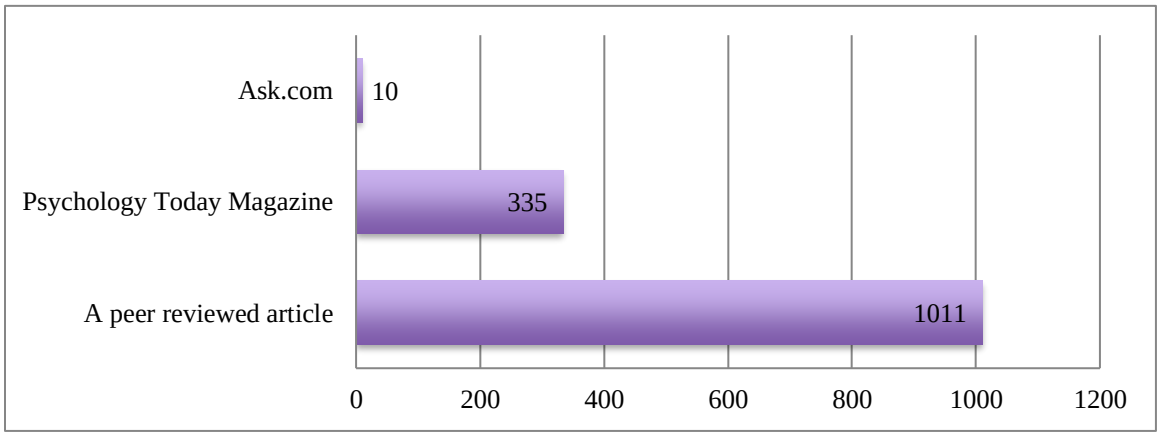
Table 3
Question 2: Identify some common elements of resources that you should examine before using them. (Check all that apply)



During the in-person lessons, materials were evaluated in terms of currency, relevance, authority, accuracy, and purpose (also known as the CRAAP test). Students were asked to

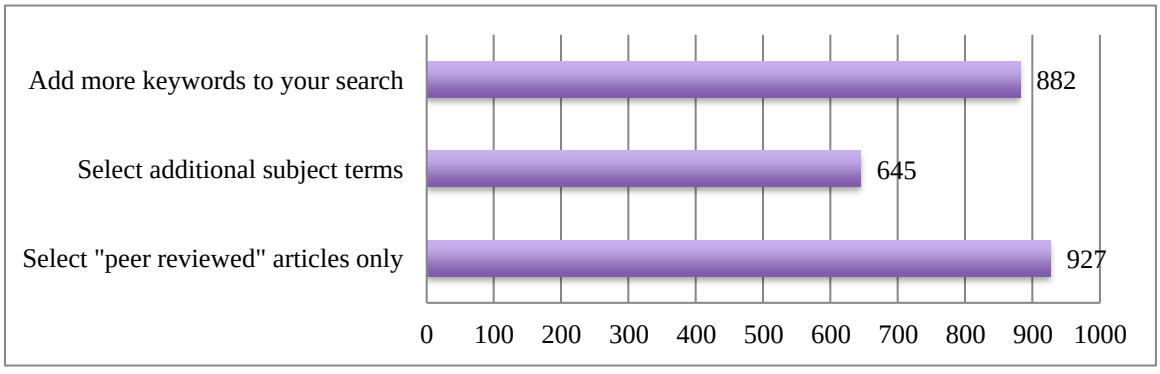
evaluate sources based on these factors during the activity portion of the lesson. The results indicate that most students were able to identify that 4 of the listed factors were important tools for evaluating a resource. However, there is some inconsistency with the greatest range being 67 students who didn't identify all the correct indicators.

Table 4
Question 3: Your professor has asked you to find scholarly resources for your research paper. Which of the following materials could fall into that category? (Check all that apply)



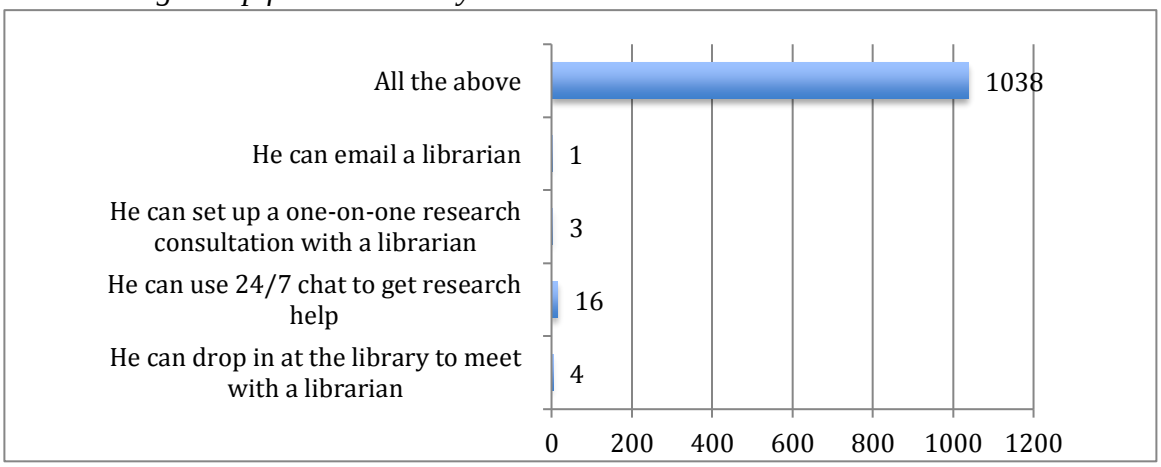
During the in-person session, students were asked to identify popular and scholarly sources and discuss a rationale as to why they felt it belonged in the popular or scholarly category. On the postquiz, most students identified a "peer reviewed article" as a scholarly resource and a limited number of students chose "Ask.com", a good sign. However, Psychology Today received 335 responses. This choice is a little trickier because it may sound scholarly, but in reality trends toward popularized science. Given that the quiz didn't have a time limit or browser blocking enabled, students also had the option to look up this magazine. These results are not surprising and confirm that resource evaluation takes continued exposure to fully understand the concept in action.

Table 5
Question 4: After conducting a search for "digital screens and sleep disorders," you retrieve 1,000 results. What are some ways you could narrow your search? (Check all that apply)



During their research activity, students had to employ various search techniques to locate materials for their scenario research. While all of these options would be appropriate, students chose adding subject terms less than their other options. This is not particularly surprising and there are a few potential explanations for this. In general, subject headings require more explanation than keywords. They also require a little more digging to locate within the search interface. However, the logic that the more you add to your search, the fewer results you will get didn't seem to convince the 418 students who didn't choose it.

Table 6
Question 5: Shawn feels that he has been searching forever without any luck. What options does he have to get help from the library?



Fortunately, the majority of students chose "All the above" when asked what options are available to get help from a librarian. This is perhaps the most important question. As students progress through their studies, understanding that help is available and knowing where they can go for it is paramount to their academic success.

Discussion

During the 2015/16 implementation of the UNIV101 library component, the librarians reached 1,662 students through UNIV101; this was significantly up from 354 students in the 2014/15 academic year. The increase in instruction is significantly related to building new relationships, offering a standardized instruction with clear learning objectives, and getting buy-in from the those directing University 101. Throughout the entire process it was essential to listen closely to feedback and maintain flexibility. Even the best laid plans still required adjustment, being prepared with the mindset that flexibility would be necessary helped create realistic expectations on both the side of the UNIV101 instructors and the librarians.

However, implementing a large-scale library orientation is not without its challenges or lessons. One lesson gained for future years, was that it is easier to have a single coordinator for scheduling sessions, embedding Canvas content, and organizing trainings. While integrated instructional technology and engaging class activities contribute to student learning, for those unfamiliar with methods of teaching through technology it can be more to train for and remember. Having a single coordinator allows librarians and section instructors a single point of contact to clarify scheduling, Canvas, and quiz concerns.

Another factor for anyone considering integrating new technology tools into their library instruction introduces a potential learning curve. This library component included multiple interactive tools through a libguide poll, as well as Canvas content pages and quizzes. Invariably, when working with a large group of instructors from diverse backgrounds there will be a variety of technology competencies. Although all librarians had some level of Canvas training and experience, many of the librarians were new to using the tools required for this implementation. When expecting competence in using new technology tools, provide opportunities for individuals to test using the technology, ask questions, and practice integrating them into their instruction.

A standard piece of advice regarding instruction is: never assume knowledge. This is especially true when teaching first year students who have had little to no exposure to academic research. The time needed to discuss the difference between popular and scholarly materials was significantly underestimated and more time should have been allotted toward that discussion. Similarly, the amount of time needed to complete the in-class searching exercise was also underestimated as students needed more time to navigate the search interface.

The postquiz results suggest that while there were still some areas that students were less sure about, they performed well on questions that asked about information evaluation, the role of Google, and library services. Variance within these responses suggest that these are also topics worth review in future library instruction sessions. The final postquiz question suggests that students successfully gained what was paramount to this session: that the library is there for them and there are many ways to find research assistance.

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Education Libraries, 40:1 (2017)

Appendix

Evaluating Resources Scenario

Scenario:
You are the summer intern at Power Up where you are expected to do research on ways of saving electricity and helping others save electricity. Currently you are working on an initiative to find out what key factors motivate people to save electricity. Natalia, your supervisor, has asked for a report on some of the research that's been done on this.

What do you need to do: Find 3 sources from credible sources for this report.

Resource Criteria:

- Published in the last 10 years
- About motivating electricity saving
- Must be from credible sources and pass the CRAAP test

Getting Started

Team up with your neighbor to find 3-4 resources and evaluate them.

1) The Question

What question are you trying to answer:	**Key words from question:**
What motivates people to save energy?	Motivation
	Energy
	Saving

2) Keywords

We know our question and we know some of the key words to get started with our research. However, we also need to look for synonyms for those key words and often our original search isn't targeted enough.

Here are other key words and phrases you might try:

		Keywords you tried:
Energy-efficient	Behavior	
Energy	Motivation	
Electricity saving	Conservation	
Electricity consumption	Saving	

3) Evaluating Results

Use the CRAAP test to evaluate the reliability of 3 resources.

Resource Title:	
Currency	*Tip: When was the information published or last updated?*
Relevance	*Tip: Is this information pertinent to your research?*
Authority	*Tip: What are the author's credentials?*
Accuracy	*Tip: Was this reviewed by experts before it was published?*
Purpose	*Tip: Why did the author/publisher make this information available?*

Resource Title:	
Currency	
Relevance	
Authority	
Accuracy	
Purpose	

Resource Title:	
Currency	
Relevance	
Authority	
Accuracy	
Purpose	