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## Redesigned With Them in Mind: Evaluating an Online Library Information Literacy Tutorial

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# Redesigned with Them in Mind: Evaluating an Online Library Information Literacy Tutorial

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## Abstract

This study investigates Wayne State University Library System's redesigned information literacy tutorial: re:Search. Seventy-two students participating in the 2010 Wayne State Federal TRIO Student Support Service Summer Residential Program participated in the questionnaire. The questionnaire measured student learning via a multiple choice knowledge based test. Confidence and satisfaction were also measured using a five point Likert scale. Students received an overall average score of 71% on the knowledge portion and student responses varied on the confidence and satisfaction portions of the questionnaire. Results clearly indicated the necessity for future revisions. The discussion will address the specific revisions being undertaken and the various ways Wayne State University hopes to continue evaluating the tutorial.

Keywords: online instruction, information literacy, online tutorial, evaluation, assessment

## Introduction

*Millennials* have been pouring into colleges and universities around the country for the past decade. Librarians have witnessed a change in student behaviors both at the reference desk and in instruction sessions. The internet has bolstered student confidence levels in their research abilities, increasing the demand for point-of-need instruction. Students are accustomed to online learning, not only because of the shift in higher education to online coursework, but also because they have been learning online at home through YouTube, social networking, and other websites. Libraries around the country have met the challenge by creating online information

literacy tutorials, but due to the ever evolving nature of the internet, these tutorials must be periodically updated.

Wayne State University (WSU) is a large public urban institution located in the midtown area of Detroit. The school boasts a population of over 30,000 students spread across a variety of undergraduate and graduate degrees as well as two professional schools ("Student Profile", 2010). WSU is known for its commitment to the community and ethnically diverse student body. With nearly 19,000 undergraduate students attending as either full or part-time students ("Student Profile", 2010) retention has become a university focus and justification for the creation of the Academic Success Center whose mission is to "promote academic excellence and foster student retention" ("Academic Success Center", 2011). At 25% of the student body, African American students represent the largest minority population at WSU ("Student Profile", 2010). Many of these students are from underprivileged Detroit neighborhoods and as undergraduate students have been given the opportunity to participate in academic programs such as the Federal TRIO program. TRIO is a federally funded program that assists at-risk students to succeed in higher education.

In 2009, the task of redesigning the Wayne State University (WSU) Library online information literacy tutorial, known as Searchpath, began. Searchpath was based on the Texas Information Literacy Tutorial (TILT) which was removed from the online environment in August of 2009 by the University of Texas ("Texas Information", 2009). The goal of the Wayne State University Library's redesign was to create a more visually appealing website, include more interactivity, videos, and to focus on specific skills necessary for new students to succeed during their first year of college. The tutorial was also to be used as supplemental material and given as a pre-class assignment for classes attending in-person library sessions. The new tutorials were dubbed: *re:Search* ("re:Search", 2010) and include the following sections: an introduction to the WSU libraries, narrowing a topic and choosing keywords, finding books, finding articles, evaluating websites, and plagiarism.

The tutorial's beta version was completed in spring 2010 and field testing was administered to evaluate its effectiveness. A questionnaire following the use of *re:Search* was given to eighty-seven students involved in the Federal TRIO program at Wayne State University, who participate in a summer bridge program before the start of their first fall semester. Seventy-two of the students responded with complete questionnaires which were used in this study. This article documents the evaluation method used, the interpretation of the data, and how the results are being used to improve the *re:Search* tutorial.

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## Literature Review

Online information literacy tutorials have become a standard component of academic library systems across the country. These tutorials have gone through many format changes over the past two decades from primitive and text-heavy modules, to more modern, interactive, and flashier tutorials. As these various instructional tools have been developed, we have seen many articles published addressing guidelines and best practices for their creation. These articles usually mention assessment and discuss plans to make regular evaluation a priority, but it is only within the more recent literature that these topics have become the central focus.

The most common instances of online tutorial evaluation in the literature occur as part of the initial development or launching of the new tools. At Wichita State University, Friehs and Craig (2008) used students from financial management classes to assess a tutorial developed to introduce Value Line to undergraduate business students. This basic survey feedback method helped them understand what they had created and realize that additional and more complex evaluation methods were necessary to fully understand their product (Friehs & Craig, 2008). A study done to evaluate modules at Kansas State University had more involved initial assessment which included targeting a specific course and implementing an online pre- and post-assessment of student perceptions relating to the modules (Lo & Dale, 2009). As a result, librarians there were able to identify many areas for further investigation including a low rate of tutorial completion, a need for more interactivity, and the necessity of faculty support (Lo & Dale, 2009). Similarly, Lechner (2007) used pre- and post-tests on graduate students in the health sciences to assess a new online database tutorial developed at the Richard Stockton College of New Jersey and compare it to a traditional lecture. He concluded that their tutorial was effective and worthwhile even though their test scores were lower than expected because the online tutorial was able to reach more students with greater flexibility (Lechner, 2007). These and many of the other initial evaluations of online tutorials that have been published led to further curiosity on the part of the researchers and the need for further ongoing evaluation.

Researchers that are undertaking the daunting task of evaluating established online information literacy tutorials for the first time are discovering similar results. Both Auburn University's Tiger Information Literacy Tutorial (TILT) and the University of Wyoming's Tutorial for Information Power (TIP) were completed in 2001 (Noe & Bishop, 2005; Tronstad, Phillips, Garcia, & Harlow, 2009), but the evaluation of these tutorials was not immediate. Noe and Bishop (2005) spent three semesters gathering data through pre- and post-tests which covered student knowledge and perception. Meanwhile, Tronstad et al. (2009) began to assess TIP in 2007 through their own set of pre- and post-tests which assessed student learning only. Both sets of researchers came to the conclusion that continuing evaluation was necessary to stay abreast of the constantly changing online learning environment

and improve their respective tutorials (Noe & Bishop, 2005; Tronstad, et al., 2009). When looking at Infoasis, a basic online information literacy tutorial at Zayed University in the United Arab Emirates, over a year after its completion, librarians started by conducting focus groups before creating an online survey for first year students (Martin, Birks, & Hunt, 2010). The survey addressed students perceptions, preferences and confidence, and found that students “strongly endorsed” the tutorial after using it throughout their foundational first-semester course (Martin, et al., 2010). Again, it was noted that future updating and maintenance of the tutorial would be necessary for continued success of its mission (Martin, et al., 2010).

Representing a very small portion of the literature, some libraries have already implemented ongoing evaluation of their online information literacy tutorials. Due to a mandate from the state legislature for regular assessment of information literacy and increased use of their online tutorials, Washington State University implemented a formal plan for ongoing assessment for their online tutorials (Lindsay, Cummings, Johnson, & Scales, 2006). Their use of student surveys resulted in increased student and faculty awareness of their online tutorials and new ideas for improvement and “useful feedback for continuous assessment and revision” (Lindsay, et al., 2006). A more simple ongoing assessment was employed at Central Michigan University, where librarians used Google Analytics to evaluate their animated online tutorials which highlight library services and general resources (Betty, 2008). From the usage and completion data collected, librarians concluded that there is confusion over the content of the tutorials and a need for better marketing of all library services and resources (Betty, 2008).

Other librarians have published longitudinal studies demonstrating their continuous assessment methods. In their article on assessment of an online course-specific tutorial, Bracke and Dickstein (2002) discussed how they continued to evaluate their tutorial over the course of four semesters. After each evaluation the tutorial was modified and expanded, demonstrating an effective model for continuing assessment of online tutorials (Bracke & Dickstein, 2002). Dent first mentioned evaluation of the VOILA! virtual library orientation at Hunter College in a 2003 article. After the development of VOILA!, students provided feedback about their experiences through an online survey (Dent, 2003). Based on the initial assessment results, a more in-depth study was completed over three years to evaluate the testing tool within the modules, providing an excellent example of the benefits of continuous, more complex assessment (Ondrusek, Dent, Bonadie-Joseph, & Williams, 2005). Adapting this routine model of assessment or one similar to it, although time consuming, seems to provide the most complete evaluation of online tutorials.

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### Method

To measure the effectiveness of the re:Search modules, an evaluation was performed to assess student confidence and satisfaction after using the modules. In addition, a test was administered to assess the students' knowledge acquisition following the use of the tutorial. On the knowledge test, an average score of 85% for the 24 questions (see Appendix A) was used to measure success. The success measurements for the confidence and satisfaction questionnaires were indicated by a majority of participants selected that they "Strongly Agreed" with statements (see Appendices B and C).

The TRIO program students were asked to participate because they are students "who have been historically underrepresented in higher education due to economic deprivation, poor academic preparation or first generation college status" ("Federal TRIO", 2010). During the summer, these students begin their basic general education courses such as English, Communication, and Math. They are housed in the campus residence halls where they live and work closely with a peer mentor. Students also have additional extracurricular activities such as fencing and study halls that they must attend.

This group of students has always worked with the library over the summer to prepare for the University Computer Literacy exam which includes a component on Information Literacy. Traditional one-shot sessions have been provided to the students but as the University's virtual presence continues to grow the library system is beginning to examine its ability to deliver quality instruction virtually. These students, it was assumed, would benefit from an online tutorial such as this even more than students who received rigorous college preparation. The perspective of these students, who would most likely have gaps in knowledge and then be exposed to the tutorial, would be a good indication of the success (or failure) of the tutorial in addressing those knowledge gaps.

The level 1 evaluation, Donald Kirkpatrick's level of evaluation for determining student reaction to the learning experience, was delivered in two separate portions as paper and pencil questionnaires (Kirkpatrick, 1998). The first section asked students to indicate their level of confidence, based on a 5 point Likert scale. There were six questions in all, one question for each module that aligned with the objectives of that module. The second section allowed students to indicate their satisfaction with the modules by using a Likert scale to indicate the likelihood that they would refer a friend to use the modules. Students were also asked to choose and specify which learning elements from the tutorial they enjoyed and disliked.

The level 2 evaluation, Donald Kirkpatrick's level of evaluation for determining the degree to which students had an increase in knowledge, was also delivered as a paper and pencil exam (Kirkpatrick, 1998). The questions were the same as the quiz questions included at the end of modules 2, 3, 4, 5, and 6. Module 1, Introduction to

the Library, did not have quiz questions, as it was a simple overview of the library system. During the evaluation the online quizzes were made unavailable as they included hints to the correct responses. For this reason, a paper and pencil questionnaire was used. The paper and pencil questionnaire also allowed for screen shots which could not be included in an online survey program such as SurveyMonkey. Students could, however, use their notes or refer back to the tutorial to answer questions as needed.

The results were gathered from seventy-two completed paper and pencil questionnaires and input into an Excel spreadsheet to measure central tendency of the data. Incomplete questionnaires and students who refused consent to participate in the study were therefore not included in the study.

## Results

### Knowledge

The results of the 24-question knowledge test are presented below. Based on the responses for all questions, the respondents received an average score of 71% on the quiz, 14% below our desired average. Individual scores on the five modules tested varied from 63% to 80% as indicated in Table 1.

Table 1.

Average Scores on Knowledge-Based Questionnaire by Module

Module	Average Score
	%
Module 2 - Keywords	66
Module 3 - Finding Books	77
Module 4 - Finding Articles	80
Module 5 - Evaluating Websites	63
Module 6 - Plagiarism	67

Averages on individual questions were wide-ranging, but there were certain topics at which students excelled. Question 1 asks students to identify types of resources by matching a resource to a description. Question 8 asks students to respond to questions based on a book record. Question 10 asks students to answer a question based on an article citation from a database result list. And finally, Questions 13 and 14 asked students to respond to questions based on criteria learned regarding

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scholarly versus popular articles. For each of these topics, students scored well above the desired score of 85%.

In contrast, there were clear areas in which students performed at least 20% below the actual average of 71%. Questions 2-5 asked students to identify and formulate keyword searches. Question 11 required students to use a database tool to help refine a broad search. Question 18 asked students to choose the best use of an internet resource for a research paper. And finally, Questions 23 and 24 asked students to identify, given the actual text, a properly cited quotation and a properly paraphrased paragraph.

#### Confidence

The confidence survey consisted of six questions, each correlating to their respective modules. The questions asked students to rate their confidence in their ability to utilize the skills and information obtained in each module. Ideally, a majority of students would have indicated that they strongly agreed with each of the statements on the questionnaire. Instead, researchers observed that the only question on which a majority of students strongly agreed was question 6 (see Table 2), which corresponds to the module on plagiarism. The lowest percentage observed for strong agreement was on question 4, which corresponds to the module on finding articles.

Table 2.

Percentage of Students who Strongly Agreed on Confidence Survey

Module	Strongly Agree %
Module 1 - Library Introduction	25
Module 2 - Keywords	28
Module 3 - Finding Books	26
Module 4 - Finding Articles	22
Module 5 - Evaluating Websites	24
Module 6 - Plagiarism	61

#### Satisfaction

The satisfaction survey looked at student opinions on the tutorial as a whole, as well as on specific components of the tutorial. A majority of students strongly



agreed that they would recommend the modules to a friend. However, that majority was only 53% of participants. Students were also asked to rate their top 3 favorite and least favorite elements of the re:Search tutorial. The elements and their descriptions are found in Table 3. Top-rated elements included the videos found throughout the tutorial and the citation game found in module 6 on plagiarism. The lowest-rated elements were the PDF help pages.

Table 3.

## Descriptions of Module Elements

Module	Description
Videos	There are a variety of videos in the tutorial from basic screencasts to animated instructional videos
Information Sliders	These interactive carousels allow students to select thumbnails to access information. There are two: one on types of sources, another on examples of plagiarism
PDF Help Pages	These are clickable buttons that provide job aids* for finding books and articles
Check Lists	There are checklists for evaluating their chosen topic and internet resources
Interactive Videos	There is an interactive tour of the library website
Citation Game	This is a flash-based game that asks students to drag and drop elements of a citation into the correct positions within a citation
Other	

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\* a sign, worksheet or other object which includes diagrams or a brief summary of instructions

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### Student feedback

A portion of the satisfaction survey provided space for students to offer optional additional feedback about the overall tutorial. Fourteen students responded and the majority of comments related to the student having had a positive experience. Students mention the tutorial as very helpful and a good resource for freshman. One student even remarked, "I think & wish all incoming freshman can take this course." Researchers were pleased to also receive constructive criticism about the tutorial. One student remarked that a search bar would be useful for quick navigation of the website. Another student indicated they thought some of the music used in videos was "cheesy." And lastly, one student said that re:Search "needs to be explained hands on."

## Discussion

### Knowledge

The results of the knowledge-based questionnaire were disappointing, as the goal of an 85% overall average was not obtained, nor was it evident on any individual section. The results show high variability in the percentage of correct responses on individual questions, which illustrate that students either understood a concept very well or did not understand a concept at all. This variability in each module caused the overall section averages to remain consistent with a range of 62% to 79%. Low average scores on particular questions and modules do, however, provide insight into concepts or procedures that students did not understand, while high average scores indicate students grasped the concept.

Researchers were surprised to find that the highest overall average score was on module 4, finding articles, as this topic is usually a challenge for Wayne State University students. Another surprise was the fact that students indicated such high confidence levels in their ability to apply the knowledge learned in module 6, which includes citations and plagiarism, while they performed poorly on a question asking them to identify parts of a citation. The only parts of the citation students consistently identified correctly were the author and date of publication.

Researchers were not surprised by the fact that students struggled with questions relating to identifying and developing keywords. Even during face-to-face instruction at Wayne State University students have difficulty with this concept. That being said, researchers were surprised by the degree to which they were unable to answer the keyword questions correctly. Students were able to use resources to find books and articles with provided search terms, but were unable to apply concepts covered in the modules to generate their own keywords from a

research question. Many students' answers included irrelevant keyword terms such as "effect."

Because none of the averages on the modules met the desired 85% average goal, it may be necessary to redesign the presentation of content. It is possible there is a divide between questions addressing ineffective module content and questions which were poorly written. Students may not have performed well on questions 2 to 5 regarding keywords because the wording of the questions may have led the students to feel "tricked" by the correct answer. This logic also applies to question 11 which was about internet evaluation. After careful review of the question during the data analysis phases, it was identified as being poorly written and did not truly demonstrate a student's ability to evaluate good uses of the internet. Questions 8, 23, and 24, however, more than likely show that the content did not support the objectives these questions wished to test.

### Confidence

The confidence survey indicated that students did not "Strongly Agree" that they felt confident in their ability to use skills presented in the re:Search tutorial. While the majority of students in Modules 1, 2, 3, 4, 5 indicated "Agree," the researchers only looked at "Strongly Agree" as a measure of success. Students who feel confident in their ability will choose "Strongly Agree" rather than "Agree." In discussing this section of the survey with an instructional technologist it was pointed out that the questions asked students to agree with two statements rather than one. This may have influenced students to reply that they did not strongly agree when in reality they may have strongly agreed with part of the statement.

It was interesting to note that students felt least confident in their ability to find articles, but this was the section students averaged the highest scores on the knowledge portion of the questionnaire. This may be because students in general are often intimidated by the task of finding articles using a database. Students may also have felt insecure regarding their responses to the questions in the article section of the knowledge based test because they are task-oriented rather than regurgitation of memorized information.

Students indicated that they were most confident in their ability to use skills learned in avoiding plagiarism. Their scores were mid-range, compared to the average scores on the other modules. Students may feel confident in their knowledge of plagiarism because they have most likely received this information in high school. Students, however, were not able to demonstrate this knowledge, as shown by their responses to the questions that directly measured their ability to identify forms of plagiarism. Finally, a majority of students indicated that they agreed, rather than strongly agreed, that they felt confident in using skills presented in the tutorial on modules 1 to 5. It is hypothesized that students selected

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“Agree” because they did not feel comfortable being negative about information being presented to them as part of their summer TRIO bridge program.

### Satisfaction

Although a majority of students indicated that they would recommend the tutorial to a friend, this was only 53% of the responses. This indicates that there is still room for improvement to make the tutorial more appealing to students.

Questions 4 and 5 were designed to include a rating system to allow students to rank their favorite and least favorite module elements by rating them 1, 2, or 3. Many students did not use the rating system as instructed and merely checked or circled elements they liked or disliked. Therefore, researchers had to rely on overall response counts, rather than using the actual rating values of 1, 2, or 3 to show favorite or least favorite elements.

Videos would have been the favorite element based on the fact that this element received the most responses by far. It is hard to make any judgments on the effect this has on the knowledge and confidence portions of the survey because the question merely asks students about a learning preference. The PDF help pages were ranked least favorite indicating that students chose this response because they simply could not locate them in the tutorial and, therefore, did not even know what they were. The PDF pages show step by step how to locate books/articles and if students had found them more useable this may have influenced confidence levels for the finding article portion of the survey. We also believed the remaining data collected, aside from most and least liked elements, in these two questions is inaccurate due to the rating system.

Observations from the classroom moderator indicated that students did not understand the language used to describe the elements in the tutorial as seen in Table 2 and were seeking clarification on how to respond.

## Conclusions and Future plans for Re:Search

Although the results of this study did not provide researchers with a glowing picture of the effectiveness of the re:Search tutorial, much of the information gathered will guide further research and development of the tutorial. Re:Search will continue to be evaluated using the same population, the summer TRIO bridge program. The assumption that these students did not have a strong background in information literacy skills and would benefit the most from these tutorials was neither supported nor disproved by the data gathered, and further investigation would be required to discover an answer. This did, however, prompt us to begin testing with other first year populations on campus. The intention of the researchers is to evaluate use of the tutorial for first year students in the Honors

College and first year students enrolled in regular general education courses, such as Communication and English.

Based on classroom observations and feedback from students, the tutorial's interface and content will be updated. Although one student suggested a search bar for easier navigation, classroom observation indicated that students had problems with the general navigability of the website – meaning getting from one page of content to another. The mechanism designed to advance content on the website will be updated to present a more user-friendly interface. Classroom moderators spent time fielding questions about the wording of the survey questions which prompted researchers to carefully consider how this affected the results. Students were also observed dancing to music in some of the videos, particularly the music used in the Scholarly Vs Popular video which probably led to the high rating for the video component. Student feedback also indicated that more hands-on elements were desired. To meet this request, Captivate interactive videos will be included to supplement current content and provide students with immediate feedback on skills and procedures learned throughout the tutorial. This will be especially useful for providing more hands-on experience in a section, such as developing and using keywords.

Furthermore, based on some analysis of the survey some changes will be made. The questions for the knowledge-based portion will be revised to more accurately measure student ability and learning. A pre-test may also be used in the future for the knowledge portion to measure the degree of learning. The questionnaires used to measure confidence and satisfaction were also reviewed by an instructional designer and suggestions for improvements were made. Specifically, with regard to the confidence survey, students were asked to provide feedback based on two skills or objectives per question, rather than one. The new survey will measure only the most important objective from each module. Questions 4 and 5 of the satisfaction survey will also be redesigned to provide students with language and a response system that is understandable. A system where students indicate on a Likert scale how helpful the various elements of the tutorial were in helping them learn the material may be more beneficial.

Finally, to obtain a more well-rounded view of the positive outcomes of having students use the re:Search tutorial, a partnership with WSU faculty will be considered. This will allow the library system to integrate the re:Search modules into the classroom to observe whether or not, at a first year student level, they are able to replace face-to-face instruction. This will require the use not only of the instruments we have described in this study, but also a longitudinal comparison of student research papers which will provide us with higher level evaluation information regarding transfer of knowledge and change in behavior in the classroom.

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Appendix A

**Part 1: Evaluation of Learning**

Please answer the following questions based on the information you learned from the six re:Search lessons you completed. Please feel free to refer back to the information in order to answer the questions.

1. Match the following resources to the type of information they are best used for:

- |                 |   |
|-----------------|---|
| A. Books        | 1. background information and key ideas on a topic  |
| B. Journals     | 2. articles on current local, national, and international events                                      |
| C. Newspapers   | 3. include in-depth historical information and in-depth summaries of research for a particular topic  |
| D. Magazine     | 4. articles written by scholars or professionals in the field   |
| E. Encyclopedia | 5. articles on current and popular culture not necessarily written by specialists in the subject area |

2. Review the following question for a research paper. Based on the video and keyword worksheet select the response that best fits the keywords you would use to research this topic.

Is global warming portrayed accurately in the media?

global warming, accuracy, media

global warming, media

global warming portrayed accurately in the media

global warming, portrayed, accurately, media

3. Review the following question for a research paper. Select the response that best shows the way you would search for this in a database.

Is global warming portrayed accurately in the media?



global warming AND accuracy AND media

global warming AND media

global warming portrayed accurately IN THE media

global warming AND portrayed AND accurately AND media

4. You're getting ready to start your final paper and a friend from class tells you the paper needs to be on a current event affecting society. Use the self-check list to decide what you should do first.

Start researching a current event affecting society

Ask another friend for advice

Reread the assignment or ask the professor for clarification

5. You begin researching your topic and you are finding that the databases only have one or two articles in them, there are no books or encyclopedias relating to your topic, and the librarian says there doesn't seem to be much research on your topic. Use the self-check to help you identify the problem:

You are using the wrong keywords for your research

The topic you picked is too specific

The topic you picked is too broad

You are using the wrong database

6. Use the library catalog from the library homepage ([www.lib.wayne.edu](http://www.lib.wayne.edu)) to search for the terms: College Retention. Which library has the most items on this topic.

Purdy/Kresge Library

Law Library

Science and Engineering Library

Undergraduate Library

7. Use the library catalog from the library homepage ([www.lib.wayne.edu](http://www.lib.wayne.edu)) to search for the term: retention. If you were looking for books that discussed keeping college students in college what term would you pick from the tag cloud that most represents what you're looking for?

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Psychology of learning

College dropouts

Employee retention

Universities and colleges

8. Using the below catalog entry answer the following questions:



- Get It
- Add to cart
- Explore
- Classic catalog

**Global warming** / David Haugen, Susan Musser, and Kacy Lovelace, book editors.  
Detroit : Greenhaven Press, c2010.

Add a Tag

**CHECKED IN** - Undergraduate Library - QC 981.8 .G56 G578 2010 -  
- More Details

Description 249 p. : col. ill., col. map ; 24 cm.

Bibliography Includes bibliographical references and index.

Contents Ch. 1. Is **global warming** a real phenomenon? -- 1. **Global warming** is real / Ben Bova -- 2. **Global warming** is a myth / Edmund Contoski -- 3. **Global warming** is a get-rich scam / Michael Reagan -- 4. The media are silencing the views of **global warming** deniers / Brendan O'Neill -- 5. Science disproves the claims of **global warming** deniers / Joseph Romm -- 6. The earth's climate is cooling, not **warming** / Deroy Murdock -- Ch. 2. What causes **global warming**? -- 1. Human-produced carbon dioxide contributes to

a. The book is checked-out:

True

False

b. The book is located in:

The Science & Engineering Library

The Undergraduate Library

The Purdy/Kresge Library

The Medical Library

9. Search for the following book by cutting and pasting the title in the library catalog (www.lib.wayne.edu) search box: Global warming and the world trading system

What is the call number of the book?

QC 981.8 .G56 G578 2010

TJ 808.2 .R44 2009

QC 981.8 .G56 D38 2008

HF 1379 .H86 2009

10. Here is a citation from a search in a database:

13. [Potential impact of ocean ecosystem changes due to global warming on marine organic carbon aerosols](#)  
Akinori Ito, Michio Kawamiya. **Global Biogeochemical Cycles**. Washington: Mar 2010. Vol. 24, Iss. 10  
[Abstract](#) | [Full Text - PDF](#) (1 MB)

What journal was this article published in?

Journal of Climate Change

Bulletin of the American Meteorological Society

Alternatives Journal

Global Biogeochemical Cycles

11. You searched for articles on Global Warming AND Temperature.

Estimates of the Water Vapor Climate Feedback during El Niño–Southern Oscillation

[A E Dessler, S Wong](#) **Journal of Climate**. Boston: [Dec 1, 2009](#). Vol. 22, Iss. 23; pg. 6404, 9 pgs

**Abstract (Summary)**

The strength of the water vapor feedback has been estimated by analyzing the changes in tropospheric specific humidity during El Niño–Southern Oscillation (ENSO) cycles. This analysis is done in climate models driven by observed sea surface temperatures [Atmospheric Model Intercomparison Project (AMIP) runs], preindustrial runs of fully coupled climate models, and in two reanalysis products, the 40-yr European Centre for Medium-Range Weather Forecasts Re-Analysis (ERA-40) and the NASA Modern Era Retrospective-Analysis for Research and Applications (MERRA). The water vapor feedback during ENSO-driven climate variations in the AMIP models ranges from 1.9 to 3.7 W m<sup>2</sup> K<sup>-1</sup>, in the control runs it ranges from 1.4 to 3.9 W m<sup>2</sup> K<sup>-1</sup>, and in the ERA-40 and MERRA it is 3.7 and 4.7 W m<sup>2</sup> K<sup>-1</sup>, respectively. Taken as a group, these values are higher than previous estimates of the water vapor feedback in response to century-long global warming. Also examined is the reason for the large spread in the ENSO-driven water vapor feedback among the models and between the models and the reanalyses. The models and the reanalyses show a consistent relationship between the variations in the tropical surface temperature over an ENSO cycle and the radiative response to the associated changes in specific humidity. However, the feedback is defined as the ratio of the radiative response to the change in the global average temperature. Differences in extratropical temperatures will, therefore, lead to different inferred feedbacks, and this is the root cause of spread in feedbacks observed here. This is also the likely reason that the feedback inferred from ENSO is larger than for long-term global warming. [PUBLICATION ABSTRACT]

[» Jump to indexing \(document details\)](#)

**Full Text** (3962 words)

**Other available formats:**

[Abstract](#)

**References:**

[» References \(20\)](#)

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  - Temperature
  - Weather forecasting
  - Greenhouse gases
  - Confidence intervals
  - Agreements
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This article was really good for your paper and you wanted to find more articles like this one. What is a subject this article provides that you could use to broaden your search?

Greenhouse Gases

Climate Change

Natural Disasters

Tropical Climate

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12. Use the following link to [Proquest Research Library](#). Cut and paste the following title in the search box (**note: since you are looking for a specific title, it is okay to do this**): *The impact of sea level rise on developing countries: a comparative analysis*. Access the pdf of the article to answer the following question.

There are aerial photographs on page 386 of this article. Which country are the photographs of?

Honduras

China

Egypt

Afghanistan

13. Decide whether the following criteria make an article Scholarly or Popular.

a. An article contains a long list of references at the end

scholarly

popular

b. An article has many charts and diagrams illustrating data collected

scholarly

popular

c. An article has colorful pictures and advertisements

scholarly

popular

d. An article has the authors name listed and affiliation

scholarly

popular

e. An article is written in common, everyday language

scholarly

popular

14. Use the following link to [Proquest Research Library](#). Cut and paste the following title in the search box (**note: since you are looking for a specific title, it is okay to do this**): *The impact of sea level rise on developing countries: a comparative analysis*. Access the pdf of the article to decide whether it is scholarly or popular.

Scholarly

popular

15. Visit the following website: <http://www.epa.gov/climatechange/> Use the “About the Site” link to decide who wrote the content for the page.

The U.S. government

The Environmental Protection Agency (EPA) Climate Change Division

Former Vice President Al Gore

The Office of Atmospheric and Environmental Climate Changes

16. There are various domains for websites. Which domain would have a website written by a group of people educating the public about global warming, not for profit.

.net

.com

.gov

.org

17. The guides made by the subject librarians at Wayne State University can help you find the correct database for your research and:

Help you with grammar and style for your research paper

All the information you could ever want for your research paper

Subject based, quality websites for your search

18. Which of the following is a good use of the Internet?

To find articles in scholarly journals

To obtain information or data from current government research

To search database that have articles and magazines

To find books relating to your topic

19. Visit the following website: <http://plantingaseed.wordpress.com/>

What type of Internet resource is this:

A Facebook page

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A Tweet

A blog

News headlines

20. Match the following terms with the correct meanings:

- |                           |  |
|---------------------------|--|
| A.Periodical title        | 1. the exact location of the article in the issue                        |
| B.Abstract                | 2. the person who wrote the article                                      |
| C.Article title           | 3. when the article was published  |
| D.Author                  | 4. the name of the newspaper, article, journal that contains the article |
| E.Date                    | 5. the specific issue where the article appears                          |
| F.Volume and issue number | 6. the summary of the article contents                                   |
| G. Page numbers           | 7. the words identifying the name of the article                         |

21. Why should you cite sources? Check all that apply.

To impress your teacher

To give credit to those whose ideas you have used

To enable others to find your sources

To practice using MLA Style

22. You and your friends are discussing upcoming paper assignments. Alicia says that she is working on her history paper and has discovered that the topic can be used for her sociology course as well. She decides she will write one paper and hand it in for both assignments. You and your friends have different reactions. Check all that are good responses.

Sean congratulates her on a great time-saving idea.

You react with alarm and tell her, "That's plagiarism."

Kelli decides to do the same thing with her English paper and hand it in for political science as well.

Matt is unsure what to think so he decides to ask for advice in the Writing Center.

23. Here is a quote Angel wants to use in his research paper:

“Almost anyone who visits in the schools of East St. Louis, even for a short time, comes away profoundly shaken. “

Kozol, Jonathan. Savage Inequalities: Children in America's Schools. New York: HarperPerennial, 1992. Print.

Which of the following uses of this quote is NOT plagiarism?

“Almost anyone who visits in the schools of St. Louis, even for a little time, comes away profoundly shaken (Kozol, 40). “

“Almost anyone who visits in the schools of East St. Louis, even for a short time, comes away profoundly shaken. “

Almost anyone who visits in the schools of East St. Louis, even for a short time, comes away profoundly shaken (Kozol, 40).

“Almost anyone who visits in the schools of East St. Louis, even for a short time, comes away profoundly shaken(Kozol, 40). “

24. Here is a paragraph that Rachael wants to use in her research paper:

A variety of surveys are beginning to indicate that Internet addiction is intensifying. Since 1994, the year that popular Internet browsers became widely available to the public, psychologists have been concerned about the power and appeal that the Internet has over our populace.

Davidson, Jeff. "Internet addiction is not pretty." *Public Management* 90.9 (2008): 40. *Academic OneFile*. Web. 15 Apr. 2010.

Which of the following paraphrases is NOT plagiarism?

A range of surveys are indicating that Internet addiction is getting worse. Since 1994, the year that the Internet was widely available to the public, psychologists have worried about the influence that the Internet has on our population (Davidson, 40).

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A variety of surveys are beginning to indicate that Internet addiction is intensifying. Since 1994, the year that popular Internet browsers became widely available to the public, psychologists have been concerned about the power and appeal that the Internet has over our populace.

Internet addiction is intensifying. A variety of surveys say so. Since popular Internet browsers became widely available to the public in 1994,, psychologists have been alarmed about the power and appeal that the Internet has over our citizens (Davidson, 40).

When the Internet became readily accessible in 1994 psychologists raised concern about how it might hold the American public under its thrall. A growing body of survey research demonstrates cause for this concern as Internet addiction increases (Davidson, 40).



## Appendix B

### Part 2: Evaluation of re:Search Content

Please answer the following questions based on the six lessons in re:Search that you completed using the following scale.

- 1 Strongly Disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly Agree

1. I understand how to navigate the Wayne State Library System and services including the homepage and using my library account.  
1                      2                      3                      4                      5
  
2. I am confident that I can choose and narrow a topic for a research assignment.  
1                      2                      3                      4                      5
  
3. I understand how to use the library catalog to search for books on a topic.  
1                      2                      3                      4                      5
  
4. I understand how to use a library database to search for articles on a topic.  
1                      2                      3                      4                      5
  
5. I am confident that I can evaluate and find quality online resources for my research.  
1                      2                      3                      4                      5
  
6. I understand what plagiarism is and how to avoid it using citations.  
1                      2                      3                      4                      5

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Appendix C

**Part 3: Evaluation of re:Search Lessons**

Please answer the following questions based on the six lessons in re:Search that you completed using the following scale or the answers provided.

- 1 Strongly Disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly Agree

1. I would recommend re:Search to a friend who is getting ready to do library research?

1                      2                      3                      4                      5

2. The questions in part 1 of this survey accurately reflected the information presented in the online lessons (you can refer back to part 1 if you cannot remember).

1                      2                      3                      4                      5

3. I was able to easily access all the information in the re:Search lessons.

1                      2                      3                      4                      5

4. What were your top three favorite elements of the re:Search lessons?  
(indicate using 1, 2, 3)

- Videos
- Information Sliders (“Types of Sources” Lesson 2, “Avoiding Plagiarism” Lesson 6)
- PDF Help Pages
- Check Lists (“Self Check” Lesson 2, “Tips and Tricks” Lesson 5)
- Interactive Videos (“Learn the Homepage” Lesson 1, “Real Examples” Lesson 6)
- Citation Game
- Other (please specify):

5. What were your top three least favorite elements of the re:Search lessons?  
(indicate using 1, 2, 3)

- Videos

- Information Sliders (“Types of Sources” Lesson 2, “Avoiding Plagiarism” Lesson 6)
- PDF Help Pages
- Check Lists (“Self Check” Lesson 2, “Tips and Tricks” Lesson 5)
- Interactive Videos (“Learn the Homepage” Lesson 1, “Real Examples” Lesson 6)
- Citation Game
- Other (please specify):

6. Do you have any additional feedback?