



Information Literacy for a Freshman Engineering Studies Course

Larry Schmidt
Science/Engineering Librarian

Charles W. Dolan
H. T. Person Professor
Department of Civil Engineering

University of Wyoming



University Studies Program

- 9 core components
- 5 imbedded components

ES 1000 – Orientation to Engineering Study

- I Intellectual Community (core)
- L Information Literacy (imbedded)
- O Oral Communication (introduction)



ES 1000 Course Components

- Freshman Reading Program - I
- Information Literacy - L
- Introduction to University Life - I
- Introduction to Engineering - I



ES 1000 Orientation to Engineering

- 13 Sections
 - 15 sessions (1 credit hour)
- 20-22 students per section
- Taught by faculty instructors and peer assistants
- Satisfies I and L and introduces O components



University Studies – L requirement

Students should demonstrate the ability to:

1. Formulate a research question.
2. Understand how to use information databases.
3. Use the UW catalog.
4. Discriminate between primary and secondary sources.



University Studies – L requirement

5. Discriminate between popular and scholarly sources.
6. Evaluate web sites and the differences between web based search engines.
7. Avoid plagiarism.
8. Know how to cite material.
9. Pass the TIP (Tutorial for Information Power) with a minimum score of 70.



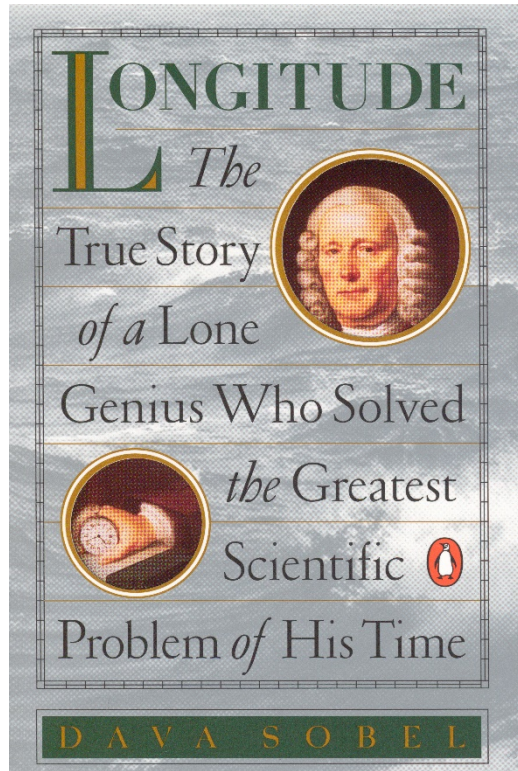
Literacy component of ES 1000

Pass the TIP Quiz (70% or better)

Develop a Research question

- Prepare a 3-5 page paper to answer the question
- Use minimum of 3 references
- Prepare a 3-5 page assessment of source

Longitude – UW Read 2005



- Freshman Reading Program.

- WHERE WILL IT LEAD YOU?

Longitude is a key element of navigation, mapmaking and surveying.

- Design Challenge
- Class Discussion – I activity
- L activities

GPS Scavenger Hunt

- Locate the Science Library
- Locate the title of a book from the call number.
 - **Catalog**
 - **Physical location**



University of Wyoming Libraries

- Separate science library
- TIP Tutorial
- <http://www-lib.uwyo.edu/>

The screenshot shows the University of Wyoming Libraries website. At the top is a banner with the text "University of Wyoming Libraries" and a collage of images including a person reading, a statue, and bookshelves. Below the banner is a navigation menu with links: "Books & more" (library catalog, renewals...), "Articles & more" (databases, Ejournals...), "Subject resources" (guides, tutorials...), "Reference tools" (online dictionaries, encyclopedias...), "Library services" (interlibrary loan, science retrieval...), and "About UW libraries" (branches, directories...). To the right of the menu is a "Multiple Library Catalog" section with a "Prospector" link. Below this is a "Ask Us!" section with the text "get answers quickly" and links for "digital projects", "alumni & friends", "hours", "off-campus access", "other libraries", and "T.I.P. tutorial". At the bottom of the page is a "WyoWeb" logo and a footer with links for "What's New", "lib blog", "FAQ", "A to Z", "UW home page", and "My Account".

University of Wyoming Libraries

Books & more
library catalog, renewals....

Articles & more
databases, Ejournals....

Subject resources
guides, tutorials....

Reference tools
online dictionaries, encyclopedias....

Library services
interlibrary loan, science retrieval...

About UW libraries
branches, directories....

Multiple Library Catalog > Prospector

Ask Us! get answers quickly

digital projects
alumni & friends
hours
off-campus access
other libraries
T.I.P. tutorial

WyoWeb

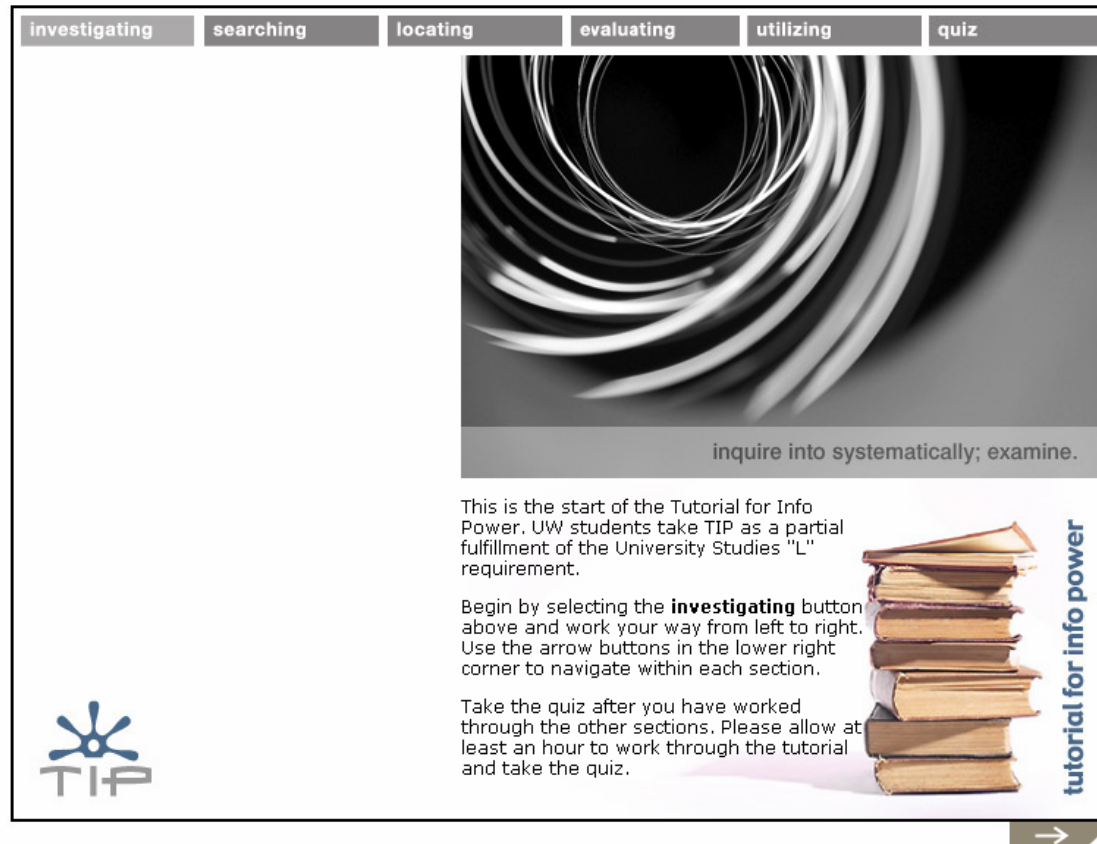
What's New | lib blog | FAQ | A to Z | UW home page | My Account

Science Library see special
➡ CLOSED instructions



University of Wyoming Libraries
Department 3334,
1000 E. University Ave.,
Laramie, WY 82071
(307) 766-3190
(800) 442-6757

TIP - Tutorial for Info Power



<http://tip.uwyo.edu/categories.html>

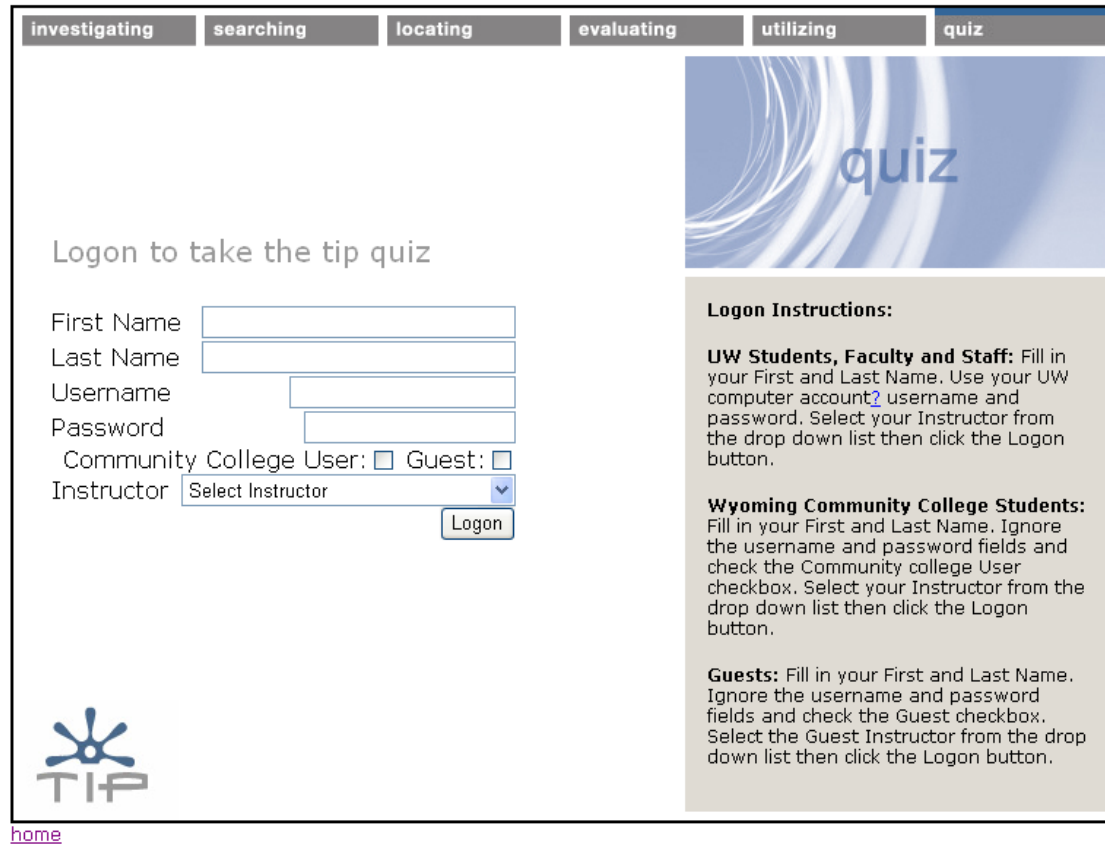


Five Modules and Quiz

- Investigating
- Searching
- Locating
- Evaluating
- Utilizing
- Quiz



TIP – Quiz Login



The screenshot shows the TIP Quiz Login interface. At the top, there is a navigation bar with tabs: investigating, searching, locating, evaluating, utilizing, and quiz. The 'quiz' tab is selected. Below the navigation bar, the main content area is divided into two sections. On the left, there is a login form titled 'Logon to take the tip quiz'. It contains fields for First Name, Last Name, Username, and Password. Below these fields are checkboxes for 'Community College User' and 'Guest', and a dropdown menu for 'Instructor' with the text 'Select Instructor'. A 'Logon' button is located at the bottom right of the form. On the right side, there is a blue banner with the word 'quiz' in white. Below the banner, there is a section titled 'Logon Instructions:' which provides instructions for UW Students, Faculty and Staff, Wyoming Community College Students, and Guests. At the bottom left of the page, there is a TIP logo and a 'home' link.

investigating searching locating evaluating utilizing **quiz**

Logon to take the tip quiz

First Name

Last Name

Username

Password

Community College User: ☐ Guest: ☐


Instructor

Logon Instructions:

UW Students, Faculty and Staff: Fill in your First and Last Name. Use your UW computer account? username and password. Select your Instructor from the drop down list then click the Logon button.

Wyoming Community College Students: Fill in your First and Last Name. Ignore the username and password fields and check the Community college User checkbox. Select your Instructor from the drop down list then click the Logon button.

Guests: Fill in your First and Last Name. Ignore the username and password fields and check the Guest checkbox. Select the Guest Instructor from the drop down list then click the Logon button.

 [home](#)

<https://secure.uwlib.uwyo.edu/quiz/>



Example of a TIP Quiz question

1. Citations are important in a research paper because
 - they show how many sources you cited and thus, how much work went into the paper
 - they are a way to increase the page length of the paper
 - they assist others in finding your sources if they want to see the entire work themselves
 - all of the above



Results - TIP Scores

Fall Semester 2005

	Number of students	Average score
Total TIP	1472	84
Freshman	745	81
Freshman Engineering	199	81
Undeclared	88	80
Sophomore Engineering	28	86

TIP Quiz 91% completion rate



TIP Quiz Question Results

- Indicate that copyright is still not understood.
- Students still do not understand database searching.
- Which set of call numbers is in the correct order?
64% responded incorrectly



Questions & TIP questioned

- Is there a problem with the tutorial?
- Is there a problem with the questions themselves?
 - TIP is in revision again based on these results and comments from library faculty.



Library Presentation - optional

Why information and research is important!

- ♦ Tacoma Narrows Bridge - Engineering design flaw

The slide features a blue background with a faint image of the Golden Gate Bridge on the left. The text "Why information and research is important!" is written in a white, italicized serif font. Below it, a bullet point with a diamond symbol reads "Tacoma Narrows Bridge - Engineering design flaw". To the right of the text is a black and white photograph showing the Tacoma Narrows Bridge in the process of collapsing, with a large section of the bridge deck falling away. In the foreground of this photo, several vintage cars and a few people are visible on the ground.

The Assignment - again

now the students are ready to ...

- 3-5 page research paper
- 3-5 assessment paper

2003 – 2004 student initiated research

2005 – faculty generated questions



Student initiated questions

A brief look

I want to find information on the new Hemi engine design.

I am looking at writing a paper about the longest suspension bridge in the world.



Reference Questions

- Student questions were not always clear
- Often came to the desk looking for Patented information
- Questions focused on a specific engineering problems



Example of a Faculty generated question

The 1714 Longitude Act was a successful “Design Competition.” Identify a modern successful design competition and compare it to the trials described in Longitude.





Results – WWW key points

- Students selected appropriate web material
- Evaluations indicated there was some confusion about Wikipedia
- Used a combination of domain sites

Results – Research Papers

- Many of the papers lacked references
- Journals citations were limited
- Web sites were the most common references



Student Evaluations

ES 1000 class evaluations – L component

Information Literacy Presentation was beneficial

Research paper was beneficial

The Library tutorial was beneficial

Attendance of the library workshop was beneficial



The Future

Fall 2006 ES 1000 Study

Power groups – 2 sections of 20 students

- TIP Quiz pretest
- TIP Quiz – taken at the end of the semester



Future Plans – continued

Tasks will include

- Reference and web site evaluations
- Faculty generated questions vs. student initiated questions.
- Writing assignment
 - Assessment by librarian, engineering faculty and writing center personnel



Other Ideas

- Can we incorporate Information literacy into upper level classes?
- Do we need to create a TIP for the sciences and engineering?
- What information skills do graduating engineers need?

Blink – M. Gladwell

- Choice for 2006
- "Blink" is a book about what Gladwell calls "rapid cognition -- the decisions we make in the blink of an eye."

UW READ

Read Explore Analyze Discuss

HOME READ EXPLORE ANALYZE DISCUSS

TUESDAY JUNE 13, 2006

Welcome to UW Read!

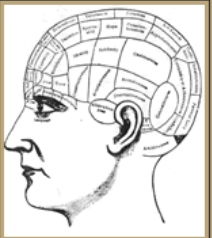
Blink: The Power of Thinking Without Thinking by Malcolm Gladwell

Gladwell is the summer-fall reading project for incoming students to the University of Wyoming in the Fall of 2006. Blink is a book about what Gladwell calls "rapid cognition ... the decisions we make in the blink of an eye." Whether it's meeting someone for the first time or thinking about buying something or reading the first two sentences of a book, your mind, according to Gladwell, "takes about two seconds to jump to a series of conclusions." The book uses examples from a number of disciplines – from the sciences to the humanities to the fine arts, to show the power (and perils) of rapid cognition.

Students will purchase Blink during summer orientation and read it before arriving at UW in the fall, where the book will be discussed in a variety of first-year courses and in public venues during Weeks of Welcome.

For more information about UW READ, contact Kelly Lowe, Director of LeaRN: Learning Resource Networks/Partnerships for Academic Success at 370.766.3448 or klowe@uwyo.edu. Visit the LeaRN website at <http://uwacadweb.uwyo.edu/LRN/>

Please watch this web site for further information regarding UW READ activities.



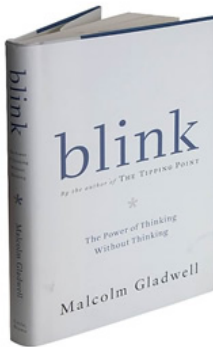
About UW READ

- 2004 - 2005
- Uni-reg

The UW READ committee is soliciting suggestions for next year's (AY 2006-2007) book. It is our hope to develop a short list of 5-7 books that committee members can read over the summer. We would like to choose the book by October, 2006.

While there are no limits as to what kind of book we choose, it is best to find that elusive book that both captivates the student imagination and excites the faculty and staff who use the book.

Submit your selection.



Links

UW University Studies

http://uwadmnweb.uwyo.edu/unst/USP_2003.htm

UW Read

<http://uwread.uwyo.edu/>

TIP

<http://tip.uwyo.edu/categories.html>

TIP Quiz

<https://secure.uwlib.uwyo.edu/quiz/>