**Eureka! Accidentally Found on Purpose**

**Arts & Sciences 1137.27 (11847), Freshman Seminar, 1 Credit**

**Fall Semester, Thursday, 1:50-2:45, Thompson 149**

**Instructor Office**

Kathy Webb Thompson Library, Room 222F

e-mail Office Hours

webb.45@osu.edu Thurs.-Friday 2-4pm, and by appointment

**Course Description**

Is intuition more than just a hunch? Is serendipity more than a happy accident? For centuries scientists, mathematicians, artists, writers, and entrepreneurs have used intuition in their processes of discovery. This tacit type of knowing suggests that research involves more than following procedures, formulae, and objective reasoning. In this seminar we will explore the interplay of self-awareness and intuition in the intellectual work of doing research as we also develop the critical skills needed to effectively navigate the 21st century information environment.

**Course Objectives**

∙ understand the ways knowledge is created and shared

∙ recognize and prioritize information needs

∙ access, critically evaluate, and effectively use a variety of technologies and information resources

∙ understand the social, political, and economic components of the information environment

∙ learn ways to manage doubt, ambiguity, and overload in the research process

∙ appreciate the importance of self-observation and metacognition in the research process

**Required Readings--available through the class CARMEN site.**

Austin, James. H. “Chance and the Creative Adventure.” *Chase, Chance, and Creativity: the Lucky Art*

 *of Novelty*. Cambridge, MA: MIT Press, 2003.

Chowder, Ken. EUREKA! *Smithsonian* 34:6 (2003): 92-94.

Darlin, Damon. “Serendipity: Lost in the Digital Deluge.” *New York Times*. Late Ed. Section BU,

 (Aug. 2 2009): 3.

Eco, Umberto. "The Force of Falsity: Ptolemy, The Flat Earth." *Serendipities: Language & Lunacy*.

 Trans. William Weaver. San Diego: Harcourt Brace, 1999.

Gladwell, Malcolm. “The Statue that Didn’t Look Right.” *Blink: the Power of Thinking Without Thinking*.

 New York: Little, Brown and Co., 2005.

Koestler, Arthur. “From Humor to Discovery.” *The Act of Creation*. New York: Dell, 1975.

Ladd, George W. "Artistic Research Tools for Scientific Minds." *American Journal of Agricultural*

 *Economics* 61:1 (Feb. 1979).

Monsay, Evelyn H. "Intuition and the Development of Scientific Theory and Practice." In *Intuition:*

 *The Inside Story, Interdisciplinary Perspectives*. New York, NY: Routledge, 1997. 103-118.

Renella, Mark and Whitney Walton. "Planned Serendipity: American Travelers and the Transatlantic

 Voyage in the Nineteenth and Twentieth Centuries." *Journal of Social History* 38:2 (2004).

**Course Policies**

You are expected to spend a minimum of 2 hours each week using the library both physically and virtually where you will locate, gather, evaluate, and choose sources that will result in an annotated bibliography and final research paper. In-class sessions will involve discussion of assigned readings and weekly assignments. Participation is a critical component in this course. Readings will be available in Carmen where you are expected to respond to, argue with, and/or share personal experiences about the main ideas in the readings.

**Attendance**

Attendance is critical. If you are unable to attend class, for any reason, you are expected to provide documentation of your absence (doctor's note, etc.). You will be responsible for the work missed during your absence. As the instructor, I reserve the right to decide whether an absence is excused or unexcused. More than two unexcused absences will result in failure for the course.

**Participation**

Participation is worth 30% of your grade. **Before each class you will:**

 1 read the assigned article

 2 respond to the question and contribute to the discussion about the reading in Carmen

 3 complete the library research assignment and be prepared to talk about it in class

 4 document your thoughts and experiences in your research journal

**ASSIGNMENTS**

**Library Work**

You are expected to spend a minimum of 2-hours each week working on your library assignment.

Your library work will inform and result in:

1. annotated bibliography
2. research journal

 3. 10-page research paper, typed and double-spaced.

**Readings (available in Carmen)**

You are expected to read each week’s assigned article and respond to the question about the reading in Carmen.

**Research Journal**

You will keep a research journal for recording your thoughts, ideas, presuppositions, choices, reflections, hunches, surprises, and actions throughout the research process. It’s more than a map of your intellectual journey or a log of your activity, it’s about being aware of and recording your observations about your thoughts, what you are feeling, reactions to readings and source material you encounter, asking questions and reflecting as you do research.

Bring your journal to class each week.

**Annotated Bibliography**

You are expected to prepare a citation and annotation for each source you will include in the final research paper. Annotations will consist of a minimum 2-sentence evaluation of the source and its relevance to your topic. Citations will follow MLA, 7th. ed. ***A sample annotated bibliography is available in Carmen*.**

The annotated bibliography will consist of the following sources, totaling 10 citations:

1) two books

2) two peer-reviewed articles

3) two editor-reviewed articles

4) two primary sources

5) two websites

**Research Paper**

10-page (typed and double-spaced) research paper summarizing the findings of your research.

**Grading**

Library Work (includes research journal): 40%

Annotated Bibliography: 20%

Research Paper: 40%

Grades will be assigned based on a 200-point scale:

 A 186-200 B 166-173 C 142-153 D 128-139

 A- 180-185 B- 160-172 C- 152-141 E 127 and below

 B+ 174-179 C+154-159 D+ 132-140

**Academic Integrity**

For all the assignments for this course, the Code of Student Conduct of The Ohio State University is in effect. Academic misconduct is defined as: Any activity that tends to compromise the academic integrity of the university, or subvert the educational process. Examples of academic misconduct include, but are not limited to:

 1. Violation of course rules as contained in the course syllabus or other information provided to

 the student; violation of program regulations as established by departmental committees and

 made available to students;

 2. Submitting plagiarized work for an academic requirement. Plagiarism is the representation of

 another's work or ideas as one's own; it includes the unacknowledged word-for-word use

 and/or paraphrasing of another person's work, and/or the inappropriate unacknowledged use

 of another person's ideas;

 3. Submitting substantially the same work to satisfy requirements for one course that has been

 submitted in satisfaction of requirements for another course, without permission of the

 instructor of the course for which the work is being submitted;

 4. For an extended version of these examples please refer to: <http://studentaffairs.osu.edu/resource_csc.asp>

**To avoid plagiarism, students must make sure that they:**

 1. Always cite their sources (following the MLA format)

 2. Read the guidelines for written assignments more than once

 3. If in doubt consult with your professor.

**Students with Disabilities**

Any student who feels s/he may need an accommodation based on the impact of a disability should contact me privately to discuss your specific needs. Please contact the Office for Disability Services at 614-292-3307 in room 150 Pomerene Hall to coordinate reasonable accommodations for students with documented disabilities. Or visit the internet address of this office at http://www.ods.ohio-state.edu for more information.

**Weekly Schedule**

**Week 1 “The picture is not thought out and determined beforehand, but rather while it is being made it follows the mobility of thought. Finished, it changes further, according to the condition of him who looks at it.”  *--Pablo Picasso***

 **DISCUSSION:** course expectations and assignments, Research Journal. Tour of Thompson.

 **NEXT WEEK READING:**

1. read Chowder, “Eureka!”
2. post to Carmen a response to the question about the reading

**LIBRARY WORK:**

Use the Library catalog to find ***One*** book in Thompson on a topic of choice. Use your journal to document your thought processes--what keywords did you use, what were your perceptions, thoughts, or feelings as you had to made choices, reframed your searches, browsed the stacks, searched for the book on the shelves.

 **→Check out the book and bring it and your journal to class.**

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**Week 2 "Chance Favors Only the Prepared Mind." --*Louis Pasteur***

 **DISCUSSION:** Chowder article, Framing the Research question or Thesis Statement.

 **NEXT WEEK READING:**

1. read Ladd “Artistic Tools for Scientific Minds”
2. post to Carmen a response to the question about the reading

**LIBRARY WORK:**

1. select a paper topic from the ***New Dictionary of the History of Ideas* (2005)**
2. draft one research question and one thesis statement for the topic
3. Use your journal to record your thought processes in choosing a research topic.

 If you cannot settle on a topic from the dictionary, here are some suggestions:

 Popular culture and images of femininity

 Popular culture and images of masculinity

 War and social media

 Historical Jesus and the *Da Vinci Code*

 Genetics and genius

 Shooting deaths and urban youth

 **→Bring your research question, thesis statement, and your journal to class.**

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**Week 3 “I find that a great part of the information I have was acquired by looking up something and**

 **finding something else on the way.” --*Franklin P. Adams (American Columnist)***

 **DISCUSSION:** Ladd article, Building Working Knowledge on a Research Topic.

**NEXT WEEK READING:**

1) r ead Austin “Chance and the Creative Adventure”

2) post to Carmen a response to the question about the reading

**LIBRARY WORK:**

Your library work this week involves building working knowledge on your topic by locating and using sources that can reliably answer questions of who, what, when, where, and why. You will use both Wikipedia and a traditional encyclopedia or dictionary (not general encyclopedias but subject specialized reference sources like *Dictionary of Developmental Psychology*) to find answers these questions. Use the techniques shown in class to find sources in the library.

 **→Write down the answers found from both sources in your journal and bring to class.**

**Week 4 “We walk, so to speak, in the realm of science, and we pursue what happens to present**

 **itself accidentally to our eyes.” --*Claude Bernard (Physiologist, proposed blind experiments***

 ***to ensure objectivity of scientific observations)***

 **DISCUSSION:** Austin article, the Economics of Information

**NEXT WEEK READING:**

1) r ead Monsay “Intuition and the Development of Scientific Theory and Practice”

2) post to Carmen a response to the question about the reading

**LIBRARY WORK:** this week you’ll identify and evaluate ***two books*** on your research topic. Use the list of references from the encyclopedia article to locate the first book. Identify the second book by using the bibliography or list of references from the first book—your choice for this book should be based on relevance and usefulness to your research topic.

 **→Use your journal to document your thought processes-- how did you choose which texts**

 **to look at? What criteria did you use to evaluate the second book? Bring your journal and**

 **the two books to class.**

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**Week 5 “I personally was twice in danger of my life when the solution of a problem suddenly**

 **occurred to me while I was crossing a busy intersection.” --*N. Rashevsky (Theoretical***

 ***Biologist, pioneered mathematical biology)***

 **DISCUSSION:** Monsay article, Information Tools and Types.

**NEXT WEEK READING:**

1) r ead Darlin “Serendipity: Lost in the Digital Deluge”

2) post to Carmen a response to the question about the reading

**LIBRARY WORK:** Use the EbscoHost databases to identify ***two secondary sources*** on your topic. Analyze the authors’ main points, in what ways do they address your research question.

**→Use the journal to document the search process including keywords and your analysis, bring it and the two sources to class.**

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**Week 6: “Some people see things as they are and wonder why. I see things that never were and ask**

 **why not.” *–Robert F. Kennedy***

 **DISCUSSION:** Darlin, Reading Citations and Metadata.

 **NEXT WEEK READING:**

1) read Gladwell “The Statue that didn’t Look Right”

2) post to Carmen a response to the question about the reading

**LIBRARY WORK:** Use EbscoHost databases to identify ***two scholarly articles*** on your research topic. What indicators tell you the articles are scholarly? Analyze the organizational structure of the articles, where are there similarities? What keyword or subject terms do they share?

**→Write your analysis in your journal and bring it and your articles to class.**

**Week 7 “Ideas often come suddenly to individuals, but they usually have a long history.”**

 **-- *Lancelot Whyte (Financier and Industrial Engineer,*** ***unifier of physics theories )***

 **DISCUSSION:** Gladwell article, Reading for Bias. What is Peer Review?

**NEXT WEEK READING:**

1) read Gladwell “Fast and Frugal”

2) post to Carmen a response to the question about the reading

**LIBRARY WORK:** Find in the library a print copy of both a peer reviewed journal compare it to a magazine both related to the broader discipline of your research topic (e.g., history, theatre, social work, education, etc.). Evaluate their contents and identify areas of potential bias.

**→Write your analysis in your journal and bring it and your articles to class.**

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**Week 8 "I once read a silly fairy tale, called ‘The Three Princes of Serendip;' as their Highnesses**

 **travelled, they were always making discoveries, by accidents and sagacity, of things which**

 **they were not in quest of." *--Horace Wolpole (18thc. Man of Letters, Historian, Politician)***

 **DISCUSSION:** Gladwell, Google Scholar, The Hidden Internet.

 **NEXT WEEK READING:**

1) read **tba**

2) post to Carmen a response to the question about the reading

**LIBRARY WORK:** find two websites that offer reliable information on your research topic, identify the evidences that led you to select them? Write your responses in your journal and bring to class.

**→Write your analysis in your journal and bring it and your articles to class.**

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**Week 9 “Among chosen contributions the most fertile will often be those formed of elements**

 **drawn from domains which are far apart.” --*Henri Poincaré (Mathematician and***

 ***Theoretical Physicist , introduced the modern principle of relativity)***

 **DISCUSSION:** Publishing Cycles in the Disciplines and Open Access.

 **NEXT WEEK READING:**

1. read Renella and Walton, “Planned Serendipity: American Travelers and the Transatlantic

Voyage in the Nineteenth and Twentieth Centuries.”

2) post to Carmen a response to the question about the reading

**LIBRARY WORK:** Locate two primary sources on your paper topic, bring to class. What evidences make them authentic? In what ways are their characteristics important to your research or enhance its quality?

**→Write your analysis in your journal and bring it and your primary sources to class.**

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**Week 10:**  **“Keep on going and the chances are you will stumble on something, perhaps when you are**

 **least expecting it. I have never heard of anyone stumbling on something sitting down.”**

 **--*Charles Kettering (American Inventor, holder of 140 patents)***

 **DISCUSSION:** Renella article, Information Remix, Attribution, Interpretation, and Plagiarism.

**NEXT WEEK READING:**

1) read Eco, “The Force of Falsity: Ptolemy and the Flat Earth”

2) post to Carmen a response to the question about the reading

**LIBRARY WORK:** identify the scholarship associated with a particular line of argument in one of the sources you are using in your research. What process did you use to identify and trace the sources for the argument.

→**Write your analysis in your journal and bring it and the sources to class.**

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**Week 11: “Unless you expect the unexpected you will never find [truth], for it is hard to discover and**

 **hard to attain.” *From Heraclitus, 540-480 BC***

 **DISCUSSION:** Eco article, Identifying Bias.

**NEXT WEEK READING:**

1) read Koestler, “From Humor to Discovery”

 2) post to Carmen a response to the question about the reading

 **LIBRARY WORK**: search a digitized historical newspaper for information, data, picture or

 illustration that addresses in some way a key concept in your research, bring to class.

 **DUE**→ **Draft Annotated Bibliography**

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**Week 12: “I do not seek, I find.” *[Picasso’s description of his own way of painting]***

 **DISCUSSION:** Koestler article, Writing up Research for Publication.

 **DUE**→ **Draft Research Paper**

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**Week 13:**

 **Discussion:**  Reflections on your library experience

 **DUE**→ **Annotated Bibliography and Research Journal**

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**Week 14:**

 **DISCUSSION:** Intuition, Serendipity, and the Art of Research

 **DUE**→ **RESEARCH PAPER**

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