REPORT ON 2017-2018 FACULTY INNOVATION GRANT

Developing a Vertically Aligned Curriculum to Teach Information Literacy Skills in Freshman Composition I and II

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INTRODUCTION

The goal of this innovation grant was to create a set of vertically aligned assignments across both Freshman Composition I and II to develop Information Literacy Skills. Although this project's aim was to develop a "stair step" of assignments that progress through both courses toward a level of literacy that is foundational for student's continued college education, what I actually created was of an iterative sequence that repeated many aspects of information literacy while gradually adding on various aspects of IL skills with each new assignment.

The original proposal identified three tasks that will form the main content of this report:

1. Identifying the appropriate developmental range of skills and the end point where Freshman should be at when completing their first year of college.

2. Create assignments to fit this range and developmental progression.

3. Assess students learning of IL Skills using the Standardized Assessment of Information Literacy (SAILS) Test.

Sandwiching this content will first be a general report of my activities following my projected timeline and then a final report of results and implications. This report also contains an Appendix with all the Information Literacy assignments and activities used and generated through this grant, as well as a budget report.

GENERAL REPORT OF ACTIVITIES

My activities for this grant closely followed my projected timeline. In July-August 2017, I read about the Framework for Information Literacy for Higher Education and did some other reading about IL in Freshman Composition classes. I also made a connection with Karen Briere, a SAC Librarian. I then developed my curriculum plan for Freshman Composition I for the Fall in close consultation with Karen regarding when we would have library instruction and what we would do. Karen and I fine-tuned the details of these activities once the semester started and collaborated on the development of resources to support the library instruction.

In December and January, I assessed the activities and assignments created for English 1301 and made some modifications. I then planned the curriculum and activities for English 1302, again in consultation with Karen on when we would do library instruction and what we would do. Karen and I also fine-tuned

the details of these activities once the semester started. I am not sure how many meetings we had, but we met many times over both semesters. Details of the plans and activities created for these classes will be described in the next portion of this report.

My plan also involved administering the SAILS Test to assess students IL Skills at the beginning and the end of the semester, both in the Fall and the Spring. My goal was to administer the SAILS Test to one English 1301 class in the Fall and to one English 1301 and English 1302 class in the Spring. Unfortunately, the funds for the grant were not available in time for me to administer the pre-test in the first few days of the Fall semester, so I was not able to administer the SAILS test in the Fall. However, I did administer the SAILS Test (pre- and post- semester) for two English 1301 and one English 1302 classes in the Spring 2018 semester.

Ideally, I had hoped to teach the same Honors Academy students both English 1301 and 1302, so that I could assess students' progress through the entire curriculum. However, this opportunity did not occur as I was not scheduled for an Honors Academy English 1302 class in the Spring. Also, I was not able to administer the SAILS test in the Fall. Hence, the students tested all came from the Spring 2018 semester.

The last proposed activity of my grant was to attend the Conference of College Composition and Communication (CCCC) in Kansas City in March. This conference is the pre-eminent conference in the teaching of college writing in the country. At this conference, I attended multiple sessions with a focus on Information Literacy and student researching skills.

TASK 1: IDENTIFYING THE APPROPRIATE RANGE OF INFORMATION LITERACY SKILLS FOR FRESHMAN COMPOSITION I AND II

In this section of the report, I will describe the basis for the IL activities and the sequence of assignments I developed for Freshman Composition. This description includes

- A review of the learning outcomes of Freshman Composition I and II and my interpretation of these learning outcomes translated into my curriculum for these classes
- A review of The Framework for Information Literacy for Higher Education and my interpretation of the developmentally appropriate place for IL in the Freshman Composition curriculum.

LEARNING OUTCOMES IN FRESHMAN COMPOSITION I AND II

The Learning Outcomes for English 1301 and 1302 are determined by the State of Texas Higher Education Coordinating Board. These objects are extremely broad:

English 1301 Learning Outcomes

1 Demonstrate knowledge of individual and collaborative writing processes.

2 Develop ideas with appropriate support and attribution.

3 Write in a style appropriate to audience and purpose.

4 Read, reflect, and respond critically to a variety of texts.

5 Use Edited American English in academic essays.

English 1302 Learning Outcomes

1 Demonstrate knowledge of individual and collaborative research processes.

2 Develop ideas and synthesize primary and secondary sources within focused academic arguments, including one or more research-based essays.

3 Analyze, interpret, and evaluate a vareity of texts for the ethical and logical uses of evidence.

4 Write in a style that clearly communicates meaning, builds credibility, and inspires belief or action.

5 Apply the conventions of style manuals for specific academic disciplines (e.g., APA, CMS, MLA, etc.).

In my own conception of my Freshman Writing curriculum, I use Anne Beaufort's framework of Five Knowledge Domains in Writing Expertise to guide my teaching goals:

- Discourse Community Knowledge
- Subject Matter Knowledge
- Genre Knowledge
- Rhetorical Knowledge
- Writing Process Knowledge

Reviewing my previous Freshman Composition curriculum helped me identify gaps and problems in how I was teaching Information Literacy in these classes. The goals of my Freshman Composition I class have included predominantly to teach the writing process and help students gain a fluency and ease with writing, in particular writing essays. I strive to develop a strong sense of audience and purpose and an appreciation of the writing situation (or rhetorical situation). Typically, my essays progress from narrative to argument, from expressive writing where students write from only their experience to more academic writing based from reading or research (often times in the form of an argument). Students progress in "Subject Matter Knowledge" from writing from personal experience to writing about unfamiliar subjects they must learn about from reading or research. I coupled this writing based from readings with instruction in how to handle and document other people's words and ideas in one's own writing. I also always include a researched essay where students must find and incorporate into their writing information from at least five research sources. My course also reviews key grammar issues and spends significant time working on sentence-level revision and editing.

As a freshman class, the curriculum is more heavily weighted on Writing Process Knowledge. I have found over the years that exposing students to rhetoric and the importance of audience is something new, so work to develop Rhetorical Knowledge is rudimentary and sets a foundation for future writing. Likewise, the Genre Knowledge for me is rather limited to writing essays (a particular type of academic genre). Discourse Community Knowledge also has a limited range. Students create a writing community, and within this writing community, my students write about writing concepts and subject (like invention, revision, or handling sources) and share and respond to each other's writing. In this way, the writing community forms a discourse community focused on writing. However, students at this freshman level are not able to delve deeply into the discourse community surrounding a topic or issue associated with their discipline like they will experience later in their academic career.

The goals of my Freshman Composition II class focus more directly on academic writing. In simplest terms, I work on the recursive and intertwined skills of critical reading, critical thinking, and critical (or argumentative) writing. The entire class is focused on read-to-write. All writing is based from reading, and although students may apply their experience in terms of understanding readings and picking topics, the essays students write are not based from personal experience but based upon their interpretation of a text (or texts). I spend considerable time laying the foundation for close, critical reading skills as well as critical, analytic thinking used to come to conclusions based upon interpretations from reading. Students learn how to develop and support their interpretations by learning to write a "critical essay" which is a standard academic essay. It is an argument that states a clear claim supported by reasons backed by specific evidence (from the text(s)).

In previous semesters, the progression of essays has moved from an explication of a poem, to a critical essay on a play, to a critical essay using research over a short story, to a final critical essay over a book. The degree of difficulty in Essays #1 to #2 moves from writing about single primary source that is short to writing about a single primary source that is longer. Essay #3 may involve a shorter work, but involves finding, reading, and writing about multiple secondary sources in addition to the primary source. Finally, in the last essay students write again from only a single primary source, but this source is much longer and more difficult since it is an entire novel.

In terms of the Five Domains of Knowledge, English 1302 focuses more intensely on the reading-writing process, and because students are writing arguments, it also involves interpretive, critical thinking skills at a higher level. Genre Knowledge is fairly narrow, focusing on an academic essay, but students learn a lot about the generic conventions related to academic arguments, especially using and documenting sources. The one additional genre students construct is an annotated bibliography. Rhetorical Knowledge likewise is narrowly focused on an academic argument which tends to be limited in its rhetorical range. In terms of Subject Matter Knowledge students with each writing event must become subject matter experts to write their essay. For Discourse Community Knowledge, I similarly create a writing community and students share and respond to their writing. When students read and write about secondary sources, they experience some of the scholarly discussion surrounding a particular topic, but compared to upper-division or graduate school excursions into this scholarly discussion, my students only get a taste.

As we shall hear more about in my section detailing the developmental sequence for these two classes I created for this grant, I found many inadequacies in this curriculum in terms of teaching Information Literacy. The biggest issue is that I did not have much research in these classes. Each semester had only one research paper: the English 1301 research paper was very limited and prescribed (researching students' Myers-Briggs Type Indicator personality type) and the English 1302 research paper was a literary research paper searching only in the academic databases. I also did not do much with Evaluating Sources, using the CRAAP Test out of Chico State University. I knew I needed to provide students more opportunities to experience researching projects that called on them to exercise more Information Literacy Skills. Also, I needed to do more related to evaluating sources.

THE FRAMEWORK FOR INFORMATION LITERACY FOR HIGHER EDUCATION

The Framework for Information Literacy for Higher Education (*Framework*) was adoped by the Association of College & Research Libraries and the American Library Association in February 2015, so it is a fairly new construct to guide the teaching and evaluation of Information Literacy Skills. As the Introduction to the *Framework* states,"The *Framework* … is based on a cluster of interconnected core concepts, with flexible options for implementation… . At the heart of this **Framework** are conceptual understandings that organize many other concepts and ideas about information, research, and scholarship into a coherent whole." These six concepts of the Framework include:

- Authority Is Constructed and Contextual

- Information Creation as a Process

- Information Has Value

- Research as Inquiry

- Scholarship as Conversation

- Searching as Strategic Exploration

My interpretation of how to implement these concepts in my freshman writing classes was based upon my understanding from the work of William Perry as well Patricia King and Karen Kitchener. William Perry in his *Forms of Intellectual and Ethical Development in the College Years: A Scheme* describes how College freshman may enter college with an immature, dualistic concept of knowledge and over their college career their concept of knowledge develops. From dualism, college students first move to "multiplicity" where they recognize that there may be more than one solution, and then to "relativism" where they see knowledge as contextual and begin to evaluate viewpoints based the source of the information and the evidence. The final stage is "commitment in relativism" where students integrate knowledge from sources with their experience and they form committed beliefs based upon values (Hall).

King and Kitchener in their [Reflective Judgment Model](#) describe how college freshmen are between Pre-Reflective Thinking where they see knowledge as existing absolutely and concretely and the Quasi-Reflective Thinking where they see knowledge as uncertain and knowledge claims to be idiosyncratic. That means freshman may trust authority unthinkingly or they may trust or distrust authority as a relative expression of opinion. In the more mature understanding of Reflective Thinking, knowledge is seen to be constructed based upon a process of reasonable inquiry from a variety of sources and based upon what is most reasonable or probable according to current evidence.

As a teacher of freshman composition, I seek to teach students to perceive and use knowledge in the more mature ways both Perry and King and Kitchener express; however, research from these scholars clearly indicates college students are not at these higher levels until later in the college or graduate school careers. The *Framework* is pitched at a higher level of intellectual development, so my challenge was to define at what level freshman understand these concepts and what knowledge practices they would engage in to learn the concept at their appropriate developmental level.

Below is a discussion of each concept and where, in my opinion, it fits for a Freshman writing student. I also felt that a freshman's engagement with *The Framework's* concepts needed to be placed along a spectrum of Information Consumer to Information Producer.

Authority is Constructed and Contextual

> Information resources reflect their creators' expertise and credibility, and are evaluated based on the information need and the context in which the information will be used. Authority is constructed in that various communities may recognize different types of authority. It is contextual in that the information need may help to determine the level of authority required. ("Framework")

Information Consumer   Information Producer

|-------**X**---|

Most freshman writing textbooks operate on a fairly simplistic (or even dualistic) basis of evaluating sources for credibility and authority, and I felt it was appropriate to work at this level. For instance, students may think simplistically that a peer-reviewed article is credible and a blog is bad and not-credible. I think for a baseline level, students need to learn that certain authors and certain information are credible or not credible based upon fairly acontextual, rigid criteria.

The challenge, then, is to help move students beyond a simplistic determination of authority based upon mechanistic criteria to evaluation based from their information need and context. For freshmen, I believe maintaining an academic need and context is appropriate, though ultimately it is a limitation when fully understanding this IL concept. However, for most freshman, the academic context is a new context, so it is important to learn what constitutes authority for their academic writing.

Information Creation as a Process

> Information in any format is produced to convey a message and is shared via a selected delivery method. The iterative processes of researching, creating, revising, and disseminating information vary, and the resulting product reflects these differences. ("*Framework*")

Information Consumer   **Information Producer**

|--------------------------- **X** --|

While this concept might be simplified from an Information Producer perspective as "the research process," I chose to interpret this concept in relative importance more on the Information Producer side related to how students evaluate sources for credibility. However, freshmen find this concept difficult because they tend to gauge information predominantly upon its finished appearance and not by how the information was created. The information production process is little known and invisible to them. Thus, if the source "looks" good or is easily found, the information must be good. The more advanced understanding of evaluating information based upon the methodology for how the information was created is more difficult for freshman since they typically do not have a sophisticated understanding of research methodology or methods.

Thus, in our evaluation of sources, I sought to help freshman see how different types of information is produced (for instance, the difference in how a peer-reviewed article is produced and published versus a personal blog post). I sought to provide some exposure to the concept of delivery method, but again the academic need and context somewhat limits teaching this concept to more traditional academic means of delivery. My target goal was to begin to break out of these traditional academic means of delivery and have students delve into the fast-paced and multimedia forms of communication for their research as well. Although students struggle to evaluate both authority and the information creation process, I wanted to them to gain some exposure in this modern communication context.

Information Has Value

> Information possesses several dimensions of value, including as a commodity, as a means of education, as a means to influence, and as a means of negotiating and understanding the world. Legal and socioeconomic interests influence information production and dissemination. ("*Framework*")

Information Consumer   **Information Producer**

|--- **X** ---|

This concept has equivalent importance for the student both as an information consumer and as a producer. From the consumer side, I believe this framework connects to concepts of how information is produced and which information has more authority. Thus, seeing what value information has offers clues for evaluating the source. For freshmen, again, the concept of the information creation process is often unknown. We live in an "information economy," and in a freshman class only initial glimpses into the value of information can be communicated. One important example of this concept freshmen, I believe, must have exposure is with academic databases as examples of valued (and credible) information.

This concept also encompasses the proper citation and attribution of source material in one's writing. For freshmen, this task of learning how to properly integrate and document sources is often a new task, so it must be taught from the bottom up. By the time students complete English 1302, they should have the ability to document sources correctly on a basic level. Included in this concept is the understanding of plagiarism and how to avoid plagiarism. Again, although students may have a basic understanding of what plagiarism is, they may not know the full conventions for handling source material in their writing correctly to avoid plagiarism.

Certain aspects of this concept, I felt were not as significant developmentally for them.
These include an understanding of intellectual property rights and copyright. Also, I felt teaching how the value, commodification, and access to information can be an instrument of social or political power were things beyond what I felt was appropriate for freshman. Likewise, I chose not to teach issues and practices of online privacy and the commodification of personal information.

Research as Inquiry

> Research is iterative and depends upon asking increasingly complex or new questions whose answers in turn develop additional questions or lines of inquiry in any field. ("*Framework*")

Information Consumer   **Information Producer**

|-- **X** --------|

For me, this concept is all about the research process. For a freshman writing class, I seek to weave the research process into the writing process and frame it in similar terms (especially the notion that the research-writing process is a form of inquiry (or "making meaning") and is recursive. The knowledge practices listed in the *Framework* are all practices I pursue in freshman composition:

- formulate questions for research based on information gaps or on reexamination of existing, possibly conflicting, information;
- determine an appropriate scope of investigation;
- deal with complex research by breaking complex questions into simple ones, limiting the scope of investigations;
- use various research methods, based on need, circumstance, and type of inquiry;
- monitor gathered information and assess for gaps or weaknesses;
- organize information in meaningful ways;
- synthesize ideas gathered from multiple sources;
- draw reasonable conclusions based on the analysis and interpretation of information. ("*Framework*")

For novice researchers, they need a lot of support and scaffolding to do almost all of these tasks. Depending on the assignment, I may define certain ones of these tasks—such as the research question, scope, or research methods. Freshman researchers typically are doing what might be called a literature research project—that is, they read scholarship and other readings on a topic and then come to conclusions to write a research paper. Typically, they are not doing empirical research that might be done at a PhD level, so the level at which each of these knowledge practices works is at a novice researcher level.

Just as I seek to help students gain comfort and proficiency with the writing process, I seek to help students gain a similar comfort and proficiency with the research writing process.

Scholarship as Conversation

> Communities of scholars, researchers, or professionals engage in sustained discourse with new insights and discoveries occurring over time as a result of varied perspectives and interpretations. ("*Framework*")

Information Consumer   **Information Producer**

|-- **X** ---|

Freshmen are typically new comers to any sort of scholarly conversation; thus, this concept is more advanced. I tend to focus on the initial knowledge practice of learning how to properly integrate and cite the information of others. However, I want students to have an experience of the "scholarly conversation" around a topic, so they write one paper in English 1302 where they read the secondary sources around a topic (a short story). However, students at this level are not yet ready to contribute to the "conversation" or even see the trends and schools of thought within this scholarly conversation. Advanced students will begin tapping into this "conversation," perhaps identify the relative importance of certain voices and trends, but this insight is rare at the freshman level.

Searching as Strategic Exploration

> Searching for information is often nonlinear and iterative, requiring the evaluation of a range of information sources and the mental flexibility to pursue alternate avenues as new understanding develops. ("*Framework*")

Information Consumer   **Information Producer**

|----- **X** --|

For freshmen, I interpret this concept as a part of "Research as Inquiry" and the researching process. This concept deals with the important practices for effectively finding information and how to effectively do it. Freshmen today have grown up online and are used to searching practices in the internet; however, they typically are novices in terms of academic search practices with databases and using keyword search strategies. Also, they may have a limited sense of where to search other than the internet, so an important aspect of this concept is to help students learn these more academic search strategies.

Another important aspect is to help students develop a sense of the research process similar to their sense of the writing process. Just as students drafts when they write and their drafts develop with repeated attempts and through peer response and self-evaluation, so too is the searching of

information an iterative, messy process. As the *Framework* mentions, the disposition of flexibility, creativity, and persistence in the face of search challenges is important.

TASK II: AN ITERATIVE SEQUENCE OF APPROPRIATE IL SKILLS ACTIVITIES AND ASSIGNMENTS IN FRESHMAN COMPOSITION I AND II

In the previous section, I identified the Learning Outcomes for English 1301 and 1302 as well as reviewed the important concepts of Information Literacy from the *Framework for Information Literacy for Higher Education* and at what level I believe these concepts operate in a freshman writing class. This next section will outline my overall course sequence for these classes and detail the particular Information Literacy tasks and activities within this course sequence that I developed during this grant. As a writing teacher with 29 years of teaching experience, I used and adapted practices I had used before as well as developed new ones.

Teaching the concepts of the *Framework* could be its own course, but IL is only one of many learning objectives in freshman composition. My approach for teaching IL (as for all my teaching) is to teach concepts and skill multiple times and gradually increase the difficulty of the application of the skill in the course. In the course outlines that follow, the objectives that specifically pertain to IL are <u>underlined</u> and in orange.

COURSE OUTLINE OF ENGLISH 1301

Essay #1—Narrative Essay	- telling a story, expressive - learning basics of the writing process - reviewing grammar basics
Essay #2—Illustrative Essay	- learning basics of essay form - learning about writing toward a particular audience for a purpose - continuing to learn about the writing process and reviewing grammar - writing an argumentative paper
Essay #3—Argument Essay Over a Book	- learning about critical reading practices - learning about constructing an argumentative essay using textual support - learning how to integrate and document information from a single source - continuing to learn about essay writing and the writing process - learning sentence styling and editing skills
Essay #4—Inquiry Research Paper	- learning the research process - learning searching strategies - learning how to evaluate sources - learning how to integrate and document information from multiple sources - learning what plagiarism is and how to avoid it - continuing to learn about essay writing and the writing process - continuing to learn sentence styling and editing skills

Although English 1301 had only one research assignment, the essay over the book was a good first assignment to work on critical reading and analysis skills necessary for research. In essence, students had to research within the one book to find information useful for developing their writing topic. It also was a good primer for working on the basics of handling and documenting quotations.

Essay #4 was a newly developed assignment for this grant. I framed this assignment as an "inquiry project," and gave students the freedom to choose a topic they were interested in learning more about. My only stipulation was that the topic came from their reading of *The Case Against Sugar*.

I created my approach to this research project by adapting ideas from Ken Macrorie's "I-Search Paper." Rather than a straight argument or report, the I-Search approach also had students describe their research process and reflect upon it. Below is the outline for Essay#4 that I developed:

Part I: Introduction	1 paragraph
Part II: Story of Research Process	1 (maybe two) paragraph
Part III: Finding #1	1 paragraph
Finding #2	1 paragraph
Finding #3	1 paragraph
Finding #4?	1 paragraph
Part IV: Reflection/Self-Evaluation of Research Process and Results	1 paragraph (maybe two)
Part V: Conclusion	1 (short) paragraph
Appendix: Authorizing Sources	(listed in alphabetic order)

Following the I-Search Paper paradigm, parts II and III ask students to describe their research process and then reflect upon how well that research process went and self-evaluate themselves as researchers. This important metacognitive element to the research paper aligns with *The Framework's* goals of developing metacognition in its concepts, as well as my own reflective assignments intended to develop reflective capacities regarding writing.

COURSE OUTLINE OF ENGLISH 1302

Team Analysis Report	• learning basics of argumentative elements • initial exploring of a fake news article and what makes it seem credible and why it is not • collaborating to analyze and research about this article
Essay #1--Critical Essay over a Play	• learning basics of critical reading and thinking • learning how to construct a critical (argumentative) academic essay • learning how to integrate and document information from a single source
Essay #2--Critical Essay over a Play and Secondary Sources	• continuing to learn skills of critical reading and thinking • engaging with scholarly articles found from academic databases • learning search strategies in academic databases • continuing to learn how to construct a critical essay • learning how to integrate and document information from multiple sources
Annotated Bibliography	• learning proper documentation of sources • learning how to evaluate sources • learning how to construct an annotated bibliography
Essay #3—Researched Argumentative Essay	• learning the research process • continuing to learn searching strategies in academic databases but applying them to web searching too • learning how to evaluate sources • learning how to integrate and document information from multiple sources • learning what plagiarism is and how to avoid it • continuing to practice critical reading and thinking skills and to learn how to construct a critical essay

Incorporating IL skills into English 1302, from my perspective, is challenging. The English 1302 classes at SAC are literature-based, and in terms of the broader IL Framework and skills, academic research over literature touches on a limited range of these concepts and skills. Thus, I adopted an approach to blend literature and academic writing and research with the research on broader real-world issues that would touch on more IL skills.

I chose to focus the class on the theme of "fake news" or what constitutes truth and honesty. For the literature, I chose to read two of Sophocles' plays: *Antigone* and *Oedipus Rex*. Thematically, these plays dealt with questions of morality and honesty that paralleled questions within today's political environment, including "fake news."

I started the class with a short collaborative activity examining and evaluating an artifact of "fake news." This set the theme for the class, had them do a bit of researching, and helped us reinforce the elements of argument (an important class learning objective).

I followed a similar progression as English 1301 where students first wrote an essay based only from a single primary source before writing research papers from both a primary source and multiple secondary sources. The important basics of essay writing and how to integrate and document sources were reviewed in this first essay.

Essay #2 asked students to write a critical essay over a play, but rather than just supporting their argument with textual evidence only from the play, students also needed to find information from research to support their argument. As a literary research paper, students researched for scholarly articles in our library databases and searched for a book in our library. As a class, we collaboratively created a set of essay questions to frame their topic, and students selected from this list of topics. In this way, I helped scaffold the important stage of "finding a topic" by helping them decide on a research question. Students wrote summaries of scholarly articles they found as well.

Essay #3 was a longer researched paper where students chose an example of "fake news" (with my assistance) and evaluated the artifact following a set of criteria Karen Brier found from The Newseum called "ESCAPE." The Research Question was the same for all the essays; students only needed to find a good fake news example to write on. As it turned out, I had to assist students in finding examples of fake news and gave them a list of six articles to choose from. The research question for the paper was this: Is this article trust-worthy or not? Is it fake news? The ESCAPE criteria are as follows:

1. Evidence: Do the facts hold up?
2. Source: Who made this, and can I trust them?
3. Context: What's the big picture?
4. Audience: Who is the intended audience?
5. Purpose: Why was this made?
6. Execution: How was this information presented?

The research paper asked students to present information from research on each of these criteria and was scaffolded by another resource I adapted from the Newseum site that I called the Evaluating Fake News Research Navigator. Students were asked to evaluate all the sources they used in the paper following the 5Ws worksheet and create an Annotated Bibliography using the summary paragraph evaluating as the note to go with each source.

This was a challenging research project given the subject matter and because students were finding most of their sources from the internet. The research navigator served as a guide to research and a

bridge from research to writing since the search items directly matched the organizational structure of the essay. The entire research task was framed as an analysis, so I spend time explicitly discussing what analysis meant. The last section asked students then to present a synthesis of what they learned from their analysis, so the task of synthesizing and what that means was likewise taught. These companion tasks of analysis and synthesis were higher order critical thinking tasks (following Bloom's Taxonomy).

ITERATIVE IL ASSIGNMENTS IN FRESHMAN COMPOSITION

Below are the IL related skills that are repeated multiple times through both classes:

- learning the research process (3 iterations)
- learning searching strategies, especially the use of academic databases (3 iterations)
- learning how to evaluate sources (5 iterations)
- learning how to integrate and document information from sources (6 iterations)
- learning what plagiarism is and how to avoid it (3 iterations)
- learning how to construct an annotated bibliography (2 iterations)

Each class had two similar progressions:

1. *Students wrote using information from a single primary source before research writing using information from multiple secondary sources. This progression in both classes assisted in teaching the read-to-write process and how to integrate and document sources since it is easier to learn these skill working with only a primary source first before applying them to working with both a primary and secondary sources.*
   a. *Essay #3 in Engl1301 asked students to write an argument from the book* The Case Against Sugar *before they wrote the research paper on a topic of their choosing inspired by the book.*
   b. *Essay #1 in Engl1302 asked students to write a critical essay on the play* Antigone*; then in Essay #2 students wrote a critical essay on Oedipus Rex incorporating information from at least three scholarly sources found in the academic databases. Essay #3 was then a researched paper evaluating an artifact of "fake news" of their choosing.*

2. *Each class contained a single, longer research paper where students were asked to engage fully in the research process. Students learned searching strategies within these two research writing projects such as how to evaluate sources and how to sort and manage information from multiple sources.*
   --Essay #4 in Engl1301 has students pick a topic of their choosing inspired from The Case Against Sugar*, define a research question, and research to find answers to that question.*
   --Essay #3 in Engl1302 asked students to evaluate an artifact of "fake news" using set criteria. Although the research question was fairly set, students chose the object of their research project.

(See Appendix I for a complete collection of IL related Essay Assignments.)

THE PLACE, GOALS AND ACTIVITIES OF LIBRARY INSTRUCTION

Library Instruction had a crucial role in teaching IL skills and fitting within this reiterative curriculum.

ENGLISH 1301 LIBRARY INSTRUCTION

In English 1301, we had a week between Essays #2 and #3 that represented the break in the course between writing that was not IL related and writing that was. Students also at this point were expected to have completed reading the book they were writing about, *The Case Against* Sugar. During this week, students read and learned about the research process and submitted proposals for their Essay #4 Inquiry research project. I wanted to get these proposed topics early to assist them in defining a workable research question. The following is a description of each Library Instruction day's goals and activities:

> Library Instruction Day 1: Students attended a standard Library Instruction session in the library conducted by librarians Karen Briere and Celita Avila. Students learned the important IL and researching skills of
>
> - developing synonyms for key terms in a research question and how powerful for researching it can be to vary search terms
> - learning key word searching strategies like and searching and phrase searching
> - learning about academic databases and how databases differ and offer different information
>
> Library Instruction Day 2: Students engaged in an activity evaluating sources using the 5Ws of Evaluating Sources (a resource adapted by Karen Brier and developed more by the two of us). In this activity, students in groups did a quick evaluation of the credibility of five or six selected sources. Then as a class we discussed this different sources level of credibility.
>
> The "rock lab for evaluating sources" was a hands-on, experiential learning activity where students closely examined and discussed the relative credibility of sources. Its goal was to help students learn the criteria for evaluating sources within the 5Ws framework, and thus apply this framework in their own research.
>
> Students then had multiple follow up activities for this activity, including
>
> - a homework activity comparing a two pairs of sources and making a judgment about which one is more credible and why (see Editing/Grammar/Writing Exercise #8 found on page 9 of the Essay Cycle #3 Assignment Sheet)
> - an activity evaluating three of the sources in their Essay #4 in which students evaluated each source in detail following the 5Ws worksheet

- the requirement to create an appendix to their final draft in which they included the evaluation summary statement from the 5Ws evaluation worksheet for each of the sources used in their final draft

ENGLISH 1302 LIBRARY INSTRUCTION

In English 1302, our library instruction came at two points in the semester. We had a week of library instruction after Essay #1 and before starting Essay #2. Then, we had a third day of library instruction focused on evaluating sources after Essay #2 and before beginning Essay #3. The following is a description of each day's activity:

Library Instruction Day 1: Students did the same Library Instruction as the 1301 students. Perhaps this was not the best choice, but we decided it was best for students to have this basic skill set, and we were not positive that these students had had this instruction before. In an ideal world where an instructor can count on students to have had this session in Engl1301, then a different second-level basic library instruction session might have been more appropriate.

Library Instruction Day 2: We did an activity called "Research Triage" which focused on the evaluation of sources but in the context of quick decisions about research hits. The handout describes Research Triage in these terms: "Research Triage involves the decision-making process when searching for research sources to use in your paper or project. Whether you are finding sources from a list of search results on a screen or on a shelf in the library, you must decide what sources to collect for deeper consideration and possible use."

This activity provided students with a decision-making process to follow they engage in strategic searching to find good research to use. It asked students in groups to cycle through the first two levels of triage twice—On-the-spot Decision and Collect for Closer Review-- and then we discussed the decisions as a class.

This activity had a more focused relevance for searching and making decisions about sources when researching in the academic databases and was designed to be more immediately relevant for Essay #2 where students needed to find scholarly articles about their chosen essay topic.

Library Instruction Day 3: Originally, I had planned for two additional Library Instruction days without having a clear idea of what I would be doing. I ended up shifting to doing one day where I helped launch students into the research task and asked Karen to come the very next class period for a modified session on evaluating sources.

I used the class period before her class visit to help students get oriented to the research task and topic choices. I explicitly reviewed concepts of "research as inquiry" and "research as strategic exploration." Before this class period, students were assigned a short task to research on research strategies. This was posted and discussed during this review session. Since it has

been four weeks since the initial library instruction about keyword strategies, this class period helped remind students of what they had previously learned.

When Karen came the next class period, we did a modified "rock lab evaluating sources." In this version of the assignment rather than arriving with pre-selected sources for students to evaluation, students were asked to bring access to sources they had found from research. Students formed into groups and discussed their sources and their experience researching.

Each group then picked two sources to evaluate more closely following the 5Ws of Evaluating Sources. Then we went around the room and discussed these sources and why they were more credible or less credible. This activity evaluating sources was meant to be more contextually relevant to their research task and the particular sources they were finding.

(See Appendix II for Library Instruction Resources and Activities.)

LIST OF ORIGINALLY DEVELOPED IL RESOURCES FOR THIS GRANT

1. English 1301 Essay #3: Exploring Cause and Effect Relationships in *The Case Against Sugar*
2. English 1301 Essay #4: Personal Inquiry Project Over a Topic of Interest from *The Case Against Sugar*
3. English 1302: Team Analysis Project of a Fake News Artifact
4. English 1302 Essay #3: Researching a Fake News Artifact
5. The 5Ws Method of Evaluating Sources
6. The 5Ws Evaluation Worksheet
7. Homework exercise applying the 5Ws evaluation criteria
8. Research Triage
9. 1301 Class Activity Evaluating Sources
10. 1302 Class Activity Evaluating Sources
11. Researching on Researching Strategies Assignment
12. Researching Fake News Research Navigator

TASK III: ASSESS STUDENT LEARNING OF IL SKILLS

To assess the impact of the Information Literacy instruction infused within the English 1301 and 1302 curriculum, I did a pre- and post- assessment using the Standardized Assessment of Information Literacy Skills Test (or SAILS Test). The SAILS Test was developed from the Association of College and Research Libraries Competency Standards for Higher Education in 2006. It is a well-recognized evaluation of Information Literacy skills. However, the test is not up to date with the Framework for Information Literacy for Higher Education, since the ACRL rejected the previous standards when they adopted *The Framework*. I see now that using the SAILS Test was a mistake given my own planning and targeting of curriculum around *The Framework*. The proper test used should have been The Threshold Achievement Test for Information Literacy (TATIL).

Nevertheless, the SAILS Test is a well-recognized test of IL and one used by our own SAC Fearless Learning Team. I want to thank my son, Joseph, for his help with the statistical analysis of these results.

ENGLISH 1301 SAILS TEST RESULTS

A paired samples t-test was conducted to compare information literacy skills before and after one semester of class. Test results indicate that there is a significant difference in the scores after one semester (M=58.6, SD=15.6) as compared to before (M=53.8, SD=13.1); t=2.67, p=.016. The t value of 2.67 indicates that these findings are statistically significant and validates student improvement in information literacy skills. The p value of .016 means that, if 100 identical tests were conducted, 98.4% of them (1-.016) would show a statistically significant difference. From this we can conclude that this class has a positive effect on information literacy.

T-Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	After	58.5684	19	15.88333	3.64388
	Before	53.7737	19	13.09660	3.00457

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	After & Before	19	.871	.000

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	After - Before	4.79474	7.82705	1.79565	1.02222	8.56726	2.670	18	.016

ENGLISH 1302 SAILS TEST RESULTS

A paired samples t-test was conducted to compare information literacy skills before and after one semester of class. These test results also indicate a significant difference in the scores after one semester (M=50.7, SD=13.2) as compared to before (M=44.5, SD=12.3); t=2.433, p=.03. The t value of 2.43 indicates that these findings are statistically significant and validate student improvement in information literacy skills. The p value of .03 means that, if 100 identical tests were conducted, 97% of them (1-.03) would show a statistically significant difference. From this we can likewise conclude that this class has a positive effect on information literacy.

T-Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	After	50.6571	14	13.19637	3.52688
	Before	44.5429	14	12.30201	3.28785

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	After & Before	14	.730	.003

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	After - Before	6.11429	9.40154	2.51267	.68600	11.54258	2.433	13	.030

Comparison Chart of Assessment Results

Class	Pre-	Post	% Change
1301	53.8	58.6	+4.8
1302	44.5	50.1	+6.1
Benchmark Associates	47.6	50.0	N/A
Benchmark All Institutes	52.6	52.7	N/A

Discussion

As the statistical analysis indicates, these results confirm that students made significant gains in their information literacy skills over the semester in both classes. Interestingly, 1301 students started and finished with higher scores than the 1302 students—even exceeding the benchmark post-test score for community college students by 8.7%. The difference in skill levels between the two cohorts may be due to one of the English 1301 class being an Honors Academy class and the 1302 class was not. However, my second English 1301 class was not an Honors class. It may just be that I had strong 1301 students and weak English 1302 students.

Even though the 1302 cohort scored low, starting 2.1% lower that that pre-test benchmark for community college students, these students caught up, barely exceeding the benchmark of 50.0. Also, this group relatively made more progress, improving their score by 6.1% as opposed to 4.8%. This greater amount of improvement may be due to the greater number of IL skills activities and assignments in Engl1302.

A Note About Numbers of Students:
The numbers of students included from both cohorts represents only students who took both the pre- and the post tests. The numbers were low due to low initial enrollment in the classes, students withdrawing, and some students being absent on one or the other of the test days.

RESULTS AND IMPLICATIONS

This section of the report will present four key results and their implications from this year-long grant working to develop a vertically-aligned IL curriculum in Freshman Composition I and II. Although I could list many more results, these four represent the most important in my mind.

Teaching IL Skills Leads to Improvement
The pre- and post- test assessment of IL skill using the SAILS Test confirms that the curriculum developed this year worked to improve freshman's IL skills. I believe this growth resulted from the combination of library instruction with class assignments that called on students to use what they learned in the library instruction. I can say that the biggest revelation for most students was learning about the library subscription databases and how to search in them and the nature of the information these databases provide.

I think of particular importance was the nature of the research project in English 1301 which had students searching for information about sugar and health in the databases. For students accustomed to finding information only on the web, they experienced a significant paradigm shift in learning what type of information is available and where to find it. The most important skills or awareness coming from library instruction include: the ability to identify key words in a research question and develop synonyms, the ability to use databases and advanced search strategies (in particular "and" and phrase searching), the ability to vary key words in searches as needed, the ability to vary where to search as needed (in particular, trying different databases), and the ability to evaluate sources.

Teaching IL Iteratively Works
This project has confirmed my own belief that we can't teach a skill once and expect students to learn it. Learning happens best through repetition and a gradual reapplication of a skill in a new context. Writing a research paper is a complex literacy task involving a multitude of strategies and skills to accomplish. All these strategies cannot be taught, much less mastered, in one attempt. Thus, it is the attempt and reattempt over and over, this application of a skill in a basic context and then reapplication of the same skill in gradually more difficult contexts, that helps students become more fluent with IL and writing research papers.

I will track one IL skill to illustrate the way this curriculum sought to iteratively teach in a vertically aligned way. This skill is MLA Documentation, in particular in-text citation. In English 1301, students were first asked in Essay #3 to document only one source. The in-text citations and Works Cited page were fairly simple to do; thus, what MLA Documentation Style is and how it works could be explained in fairly simplistic terms. Essay #4 in English 1301, however, was a more difficult task, asking students to incorporate and document at least six sources across a mix of book, database, and web sources. Essay #4, thus, launched students full swing into MLA Documentation, but Essay #3 had prepared them for doing this full documentation task.

In English 1302, the iterative sequence repeats. Essay #1 asked students to document only one book source; thus, it enabled a review of the basic moves and format for MLA Documentation. Essay #2

focused only on reading and documenting scholarly articles and books, but the number of sources was fairly minimal—three or four at least. Essay #3, however, was similar to the last paper in English 1301 in that it called on at least six source from a variety of places—the web and databases or books. Thus, we see this principle of iterative teaching of an IL skill through repetition and reapplication of the skill in a new context, frequently a more difficult context.

Going Deep Is Important

As I mentioned, writing a research paper is a complex literacy task. I observed students benefited the most by engaging fully and deeply into an entire research project, and a big part of "going deep" meant engaging in complexity. Students benefited by wrestling with the entire research and read-to-write process, and it was this wrestling with the entire process where they learned the most. Isolated, shorter exercises or learning activities were not as successful at teaching IL skills. Essays #4 in English 1301 and #3 in English 1302 were projects asking students to engage with the entire research writing process. The preceding essay assignments asking students to write on one primary source were important stepping stones preparing for them for the more complex task of researching and writing about multiple sources.

Developing Key Resources for Evaluating Sources

Probably the most significant resources developed out of this grant have been resources for evaluation sources. These include the 5Ws for Evaluating Sources and the in-class activity where students use the 5Ws to evaluate sources. I believe this framework for evaluating sources is powerful, and the "rock lab" activity worked well in English 1301. I was not as satisfied with how the parallel activity worked in the English 1302 class that did not focus on a pre-set group of sources.

The second resource developed from this grant was the Research Triage guide for evaluating sources. What I don't think was made explicit in our presentation of this guide and our in-class activity was where this guide for evaluating sources fit and how it related to the more involved 5Ws evaluation. I believe this problem was more to do with the newness of developing this tool and the "on-the-fly" way in which I was developing curriculum and resources in English 1302.

I see now that the relationship and sequence for library instruction, 5Ws evaluation, and Evaluation Triage should have been better coordinated and repeated in English 1302. Below is a comparison of the sequence I used and the one I see now I should have done:

Actual Sequence	Revised Sequence
Essay #2	Essay #2
- Library Instruction - Research Triage --in-class researching	- Library Instruction 5Ws Evaluation Activity

--out-of-class researching (No 5Ws source evaluation) Essay #3 • 5Ws Evaluation Activity --students brought sources to evaluate • Researching and 5Ws evaluation of sources	• Research Triage --in-class researching --cycle through all three levels to do 5Ws evaluation in-class • Continued researching following Research Triage—produce 5Ws evaluation of set of sources found Essay #3 • Review Library Instruction • Research Triage --in-class researching --cycle through all three levels to do 5Ws evaluation in-class • Continued researching following Research Triage—produce 5Ws evaluation of set of sources found

What I see now is how Research Triage and the more thorough—and necessary—evaluation of a source fit. Currently, the 5Ws is not within the triage sequence. Currently, the sequence goes this way:

1. Level I Triage = On-the-Spot Decision
2. Level II Triage = Collect for Closer Review
3. Level III Triage = Keep the Source for Use in Your Paper/Project

I believe Level III is not really a triage or decision-making activity—it is the end point. Instead, the 5Ws should be Level III where researchers evaluate a source they believe works well with what they are looking for. Before investing the time and effort to read the source closely and pull information from the source to use, the researcher needs to check that source out well, and the 5Ws is a good tool for this purpose.

One thing that I believe does work is to save Research Triage for English 1302. In this way, it reviews a previous activity but in much more detail. In addition, the in-class Research Triage activity must be tied to "research as strategic exploration" and represents an in-class opportunity to assist students with key word searching strategies.

CONCLUSION

The complex and multiple literacy goals of instruction in Freshman Composition are truly overwhelming. Freshman Composition represents only one stage in students' growth in learning how to write and read effectively. As students learn to read and write about subjects outside their personal experience, they need to learn how to find and assess information outside themselves. Hence, the importance of Information Literacy. Thanks to the fast-pace of the internet, today's IL landscape is ever more complex and multitudinous.

The Freshman Composition curriculum developed in this grant seeks through an iterative approach to build a foundation for students' ability to research about academic topics, but also research in real world topics on the internet. In particular, this curriculum helps students learn to question sources of information critically so they might use the most credible information to form their opinions.

Of course, this curriculum is imperfect and limited. On the English 1301 side, I believe an additional research project needs to be added. Also, more resources surrounding the modified I-Search paper need to be developed, particularly helping students in their ability to describe their own research process and self-evaluate it. On the English 1302 side, I don't know that I have found the right mix of keeping the course as a literature-based course, yet engaging students in real world research. The initial research activity stood too alone in the course sequence, and the second essay did not engage students as deeply in the scholarly literature as I had hoped. Also, I see now the better way in which to integrate Research Triage with the 5Ws.

Teaching IL skills, like teaching Freshman Composition, is always a work in progress. The assignments and resources I have developed this year are likewise works in progress and I know will grow and change in the future. This grant has been a wonderful opportunity for me to rethink my approach to teaching Freshman Composition, and it has helped me improve how I go about teaching IL in my classroom. I am grateful for this opportunity.

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APPENDIX I: IL RELATED ESSAY ASSIGNMENTS

English 1301

Essay #3: Exploring Cause and Effect Relationships in *The Case Against Sugar*

Link to full Essay Cycle #3 Assignment Sheet with all related assignments to this essay.

Essay #4: Personal Inquiry Project Over a Topic of Interest from *The Case Against Sugar*

Link to full Essay Cycle #4 Assignment Sheet with all related assignments to this essay.

English 1302

Team Analysis Report Over a Fake News Artifact

Essay #2: Researched Critical Essay Over *Oedipus the King*

Essay #3: Researching a Fake News Artifact

Evaluating Fake News Research Navigator

APPENDIX II: LIBRARY INSTRUCTION ACTIVITIES AND RESOURCES

5Ws Method of Evaluating Research Sources

5Ws Evaluation Worksheet

Research Triage Guide

Engl1301 LibGuide Site

Engl1302 LibGuide Site

Include on the next pages:

Eng1301 Evaluating Sources Activity

English 1302 Evaluating Sources Activity

Researching on Research Strategies Assignment

English 1301 Evaluating Sources Activity

Evaluating Sources Activity

REMEMBER: EVALUATION IS A PROCESS. NO SINGLE QUESTION IS ENOUGH TO DETERMINE A SOURCE'S USEFULNESS. YOU NEED TO TAKE THEM ALL INTO CONSIDERATION.

Student Learning Activity: Evaluate a variety of sources for the ethical and logical uses of evidence using the *Five W's Method*.

ESSAY TOPIC: *The Women's Rights Movement and the Role of the Women's March of 2017*

Directions for activity:

1. Around the room you will find multiple source documents or what we will call 'artifacts'.
2. You will be divided into groups and provided with a worksheet.
3. As a group you will move from one artifact to another and evaluate each artifact using the 'Five W's' Method, write notes about each artifact on your worksheet.
4. One member of the group may need to use the computer to check links and to research an author's credentials.
5. After evaluating each artifact decide, as a group, whether you would feel confident in using the source for an academic research paper? Explain why or why not?
6. Each Group will report back to the class their opinions on each artifact and whether they would feel confident using it as a source for an academic research paper.
7. Then, each group, will discuss which **one** artifact would be the "**best choice**" as a source for using in an academic research paper.
8. Share with class, through voting, which artifact was the best source material.

WRAP UP: BASED ON TODAY'S ACTIVITY, INDIVIDUALLY, WRITE A PARAGRAPH EXPLAINING TO ANOTHER STUDENT SOME OF THE ELEMENTS TO CONSIDER WHEN EVALUATING A SOURCE FOR THEIR RESEARCH NEEDS.

- Five Ws Table

English 1302 Evaluating Sources Activity

Preparation for Class:

Bring to class access to at least three sources you have looked at in regards to your research topic (ONE needs to be a peer-reviewed article from the SAC Databases on fake news).

Class Activity

Today we will be doing an exercise on evaluating sources.

When researching in college (and in LIFE), you want to use the most credible, authoritative sources as possible. It is crucial that you critically evaluate any source you are potentially going to base your thinking upon.

We will first learn about the 5Ws Evaluating Research Sources.

Then in groups, we will pick two sources to evaluate using the 5Ws Evaluating Worksheet.

Then we will share what we have learned about our sources and whether they are "credible" or not.

Researching on Researching Strategies

A researcher's goal is to FIND good information for his or her purpose. WHERE you research can influence what strategies you might pursue.

For our purposes, we will focus on

1. researching electronically (on the web or on library databases) using KEYWORD search strategies
2. researching to find books in the library (which may also involve using keyword search strategies in the library catalogue

For this exercise, I want you to take 20-30 minutes to research on researching strategies. You will likely get a lot of LibGuides and other similar "how to" sites. These will present you with "strategies" which are particularly actions you can do to get to the goal of finding information.

As you read about search strategies, make note of sites you particularly like and strategies that you think look particularly useful.

Then write out the following things to post:

1. The Name and web address to ONE website on research strategies you like the best.

2. Describe TWO strategies for researching (that could be from this website or not) that you found interesting. (It can be OK to copy and paste information from the site--if it is a different site than your one best site, include the URL to where this strategy came from).

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Assignment posted in a Canvas discussion forum visible to all students.

APPENDIX III: BUDGET REPORT

This budget report presents my initial proposed budget along with my actual expenses:

Proposed Budget: equipment & supplies; speaker honoraria; travel reimbursements, etc.

Item	# items needed	Per item cost	Total	Actual
SAILS Assessment Instrument 2 Sections Eng1301 (pre- & post) 1 Section Eng1302 (pre- & post)	150	$6	$900	$558
Travel to Spring 2018 College Conference on Composition and Communication	1 registration travel lodging 3 nights @ $120 food $35/day	--$180 --$450 --$360 --$115	$1105	$1130
			$2005	$1688

The lower actual cost for administering the SAILS test was due to two factors: 1) I had lower enrollment than I projected originally in these three classes; and 2) the number of students was also lower due to student withdrawals and/or students not attending either the pre- or post- test date.