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Collaborating with Teaching Faculty on Transparent Assignment Design

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Melissa Bowles-Terry, John Watts, Pat Hawthorne, and Patricia Iannuzzi

Introduction

In light of a campus-wide curricular change at the University of Nevada, Las Vegas (UNLV), the University Libraries created Faculty Institutes to build capacity for effective teaching and assessment practices campus-wide. The UNLV Libraries Faculty Institutes are multi-day workshops designed and delivered by librarians to help teaching faculty create courses and assignments that are research-rich and closely aligned with the newly launched General Education learning outcomes. This chapter provides the situational factors leading to the overhaul of General Education at UNLV and how librarians leveraged this opportunity to maximize their role as experts in information literacy and instructional design. This chapter also describes how librarians used instructional design principles for creating significant

learning experiences[1] and transparent assignment design[2] to guide the development and delivery of the Faculty Institutes. Finally, we draw on our experiences to suggest that the interdisciplinarity and specialized skills of librarians make us particularly poised to be leaders of curricular transformation at our institutions.

Institutional Setting

The University of Nevada, Las Vegas (UNLV) is a large metropolitan research university located in the central Las Vegas Valley. UNLV is one of two four-year public research universities in the state of Nevada, with notable programs in hotel administration, law, and nursing.[3] As of Fall 2015, UNLV claims an enrollment of 28,600 full-time students, with an undergraduate population of 23,801 students. Our student population is characterized by two important demographics: over 84 percent of students (24,000) are Nevada residents, and many undergraduates choose to live off-campus and commute. Additionally, over 55 percent (15,868) of students are from a minority background; in 2012, the U.S. Department of Education designated UNLV as a Minority-Serving Institution, and in 2015, *U.S. News and World Report* ranked UNLV as tied for second most ethnically diverse campus in the country.[4] Part of UNLV's mission is to be recognized as a top-tier public university in research, education, and community impact by 2025. In this effort, UNLV strives to be a national leader in education and to promote excellence in teaching undergraduate, graduate, and professional school students.[5]

The UNLV Libraries system is comprised of Lied Library, which serves as the University's main library, and three satellite locations including a Music Library, Architecture Studies Library, and Teacher Development & Resources Library. The UNLV University Libraries are committed to our role as a campus partner in student learning and dedicated to fulfilling the University's teaching and learning initiatives. Our 2016/2017 Strategic Framework states that the "University Libraries collaborates broadly to ensure student achievement through direct instruction, partnering with faculty on assignment design and development of learning experiences outside the classroom."[6] This includes offering specialized workshops for faculty that support research as well as teaching and learning. In this capacity, the UNLV Libraries work to situate librarians at the center of the student experience through collaboration with faculty.

Problem to Be Addressed

In the fall of 2011, the UNLV Faculty Senate approved a proposed reform of the General Education Program, which included implementation of a suite of stan-

dardized University Undergraduate Learning Outcomes (UULOs). The five UULOs are intended to foster attainment of knowledge and skills in the areas of Intellectual Breadth and Lifelong Learning, Inquiry and Critical Thinking, Communication, Global/Multicultural Knowledge and Awareness, and Citizenship and Ethics.[7] Each of these broad areas are distilled into six specific learning outcomes embedded throughout the General Education Program.

The UULOs were inspired by the Association of American Colleges & Universities (AAC&U) Essential Learning Outcomes,[8] which were developed in response to an employer survey identifying major gaps in the preparation of newly minted college graduates.[9] AAC&U responded to these gaps and the intellectual and social challenges of the twenty-first century with Essential Learning Outcomes that are attainable through a modern liberal arts education. The Outcomes encompass broad areas such as: Knowledge of Human Cultures and the Physical and Natural World; Intellectual and Practical Skills; Personal and Social Responsibility; and Integrative and Applied Learning. Each broad subject area includes several sub-outcomes that address specific skill and knowledge areas. For example, and perhaps most notable to librarians, the area of Intellectual and Practical Skills includes both critical thinking and information literacy learning outcomes.

AAC&U's goal was to connect these essential liberal arts skills to the needs of professional education and the workforce. This was attractive to both small liberal arts colleges and large institutions, like UNLV, with strong workforce-related missions. Also attractive to institutions adopting the Outcomes were standardized rubrics created to measure students' mastery of the criteria for each Essential Outcome.[10] Because the UNLV UULOs were based on these Essential Learning Outcomes, assessment of student learning in the General Education Program could be accomplished using the rubrics or variations of the rubrics.

Instead of a traditional, distributed model of general education requiring students to fulfill the requisite core courses in their first four semesters before completing course work in their major, UNLV implemented a vertical model of general education advocated by AAC&U and promoted through the LEAP initiative.[11] In this vertical model, UULOs are embedded into a series of hallmark courses intended to sequence and integrate the outcomes throughout the undergraduate experience. These courses include: First-Year and Second-Year Experiences, completed in the first two years; a Milestone Experience, completed in the sophomore or junior year; and a Culminating Experience, required to graduate in the chosen major. These hallmark courses are designed to introduce all UULOs in the first year, and systematically reinforce them until their final application in the Culminating Experience course. This model is designed to provide students with a clear, developmental pathway for these foundational learning outcomes and to act as corner-

stone courses for assessment of the program. In addition to these courses, students complete twelve constitutive credits to fulfill the General Education requirement. One of the benefits of the vertical model is that it provides faculty with a clear curriculum map for undergraduate learning from the first year through graduation, allowing programs to sequence curricula in coherent, systematic, and pedagogically sound ways.

Well-received by faculty and administration alike, the implementation of the new General Education model called for substantial faculty development. The General Education reform required each program to create new courses, or to identify existing courses that would become the four hallmark courses of the major. Whether a program created a course from scratch or adapted a course from current offerings, the introduction of the UULOs required extensive instructional design or redesign of those courses. A principal strategy of the reform was to implement each of the core courses over four years beginning in the fall of 2012 with the First-Year Experience. This staggered approach to implementation provided programs with room to explore how the courses could build upon one another and allowed time to consider how the UULOs were expressed through the lens of each discipline.

Library faculty played a central role in the development of the new General Education model. Librarians designed and facilitated an inaugural General Education reform retreat for University stakeholders in 2007 and participated in committees and working groups throughout its development.[12] At the outset, the Libraries considered it strategic to exclude the stand-alone information literacy outcome featured in the AAC&U Essential Learning Outcomes and instead embedded information literacy across all of the UULOs. Librarians identified the Critical Thinking and Inquiry UULO as a locus for librarian partnership in this development because this UULO addresses major tenets of information literacy, like composing a question, seeking and evaluating information sources, and constructing reasonable arguments or explanations based on one's findings.[13] In this capacity, the Libraries sought to provide faculty development in embedding the Critical Thinking and Inquiry UULO into each of the hallmark courses.

The Libraries were uniquely positioned to lead these faculty development activities for implementation of the new General Education program. For many years, the Libraries enjoyed a collaborative relationship with the UNLV Teaching and Learning Center, which was housed in the main Library and served as a conduit for collaborations between librarians and teaching faculty in matters of instructional design for research-rich courses. Severe University budget cuts in 2008 led to the closing of the Teaching and Learning Center, leaving a dearth of resources for teaching faculty developing or re-designing courses for General Education. Due to the Libraries' robust connections with Teaching and Learning prior to 2008, many teaching faculty and members of

University Administration viewed UNLV library faculty as experts in teaching and learning, so librarians leading faculty development initiatives in the Critical Thinking and Inquiry UULO was a natural progression.

Another strength for the Libraries was a robust library liaison program with an emphasis on campus teaching and learning initiatives. Liaison librarians are paired with specific schools or programs to support faculty research needs as well as partner with faculty to develop students' research skills in the context of each discipline. Therefore, liaison librarians had developed a record of work connected to the teaching and learning goals of the different schools and colleges across campus. Complementary to the library liaison program, the Libraries created an Educational Initiatives Department charged with leading the instructional goals of the Libraries in the spirit of the University's teaching mission. Librarians in this department focus their efforts on instructional design for library instruction, teaching development for instructors and graduate students, face-to-face instruction of undergraduates in General Education courses, and the assessment of student learning as it relates to information literacy, critical thinking, and inquiry. The collective expertise of these two departments, coupled with a strong history of educational leadership by the UNLV University Libraries, provided a firm foundation for librarians to lead initiatives in the General Education reform.

Description of the Project
Collaboration between Librarians and Instructors

Faculty Institutes at UNLV Libraries are intentionally designed multi-day workshops in which instructors work intensively one-on-one or in small groups with a librarian to develop a research assignment that engages students in critical thinking and offers an authentic and engaging research experience. The need for the Faculty Institutes has been integrally tied to general education reform, and the Institutes have been based around developing courses in the vertically integrated pathway, with Institutes focused on First Year Seminars, Second Year Seminars, Milestone Experiences, and Culminating Experiences.

Faculty were invited to participate by the provost's office or by their deans, as they were identified as being responsible for a general education course. Faculty were also offered monetary incentives (funded by the Libraries Advisory Board and other supporters) to participate and complete the related work: delivering a redesigned syllabus, assignment description, samples of student work, and a written reflection on the experience. More than 100 faculty members have participated over the past five years, from lecturers to senior faculty.[14]

Development of Institutes: Dee Fink Significant Learning + Transparency

Faculty Institutes were originally designed based on Dee Fink's instructional design model for significant learning, which is used in AAC&U's faculty development programs.[15] More recently, the UNLV campus has been involved in the national Transparency in Learning & Teaching (TILT) project.[16] We have used both models, separately and together, to design six different institutes for university faculty since 2010. Although Transparency in Learning & Teaching is not an instructional design model per se, it does lend itself to good assignment and course design and provides simplified, understandable language for both instructors and students. It is also a language that is shared across campus, and has thus been valuable for us to adopt and include in our integrated learning model. The use of these models together reflects the evolution of the General Education reform on the campus and the adaptability of the institutional approach. To facilitate understanding of how this works, a brief overview of how the models are used within the context of the Faculty Institutes is provided here.

Identify Situational Factors

The first step in Dee Fink's significant learning model is to identify situational factors. We consider the context of the teaching and learning situation, which

Figure 20.1
Fink and TILT Design Processes Aligned
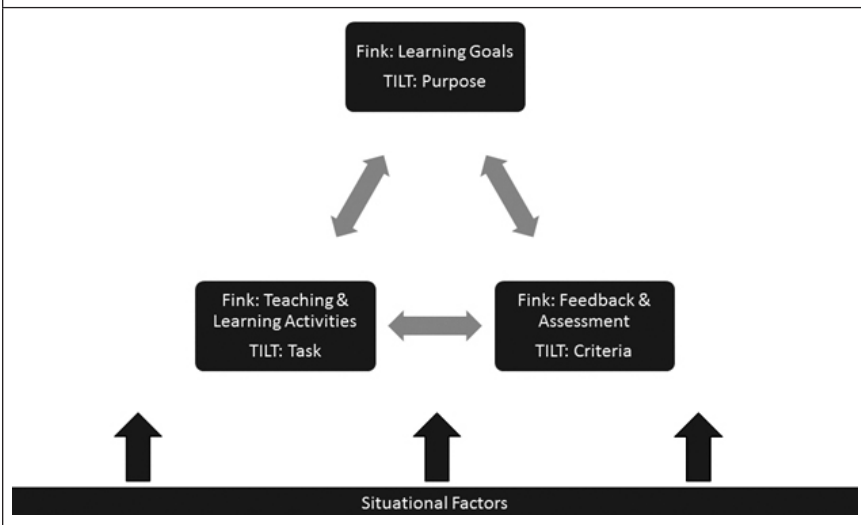
may include curriculum mapping to think about what students experience before and after the course or assignment. We also think about the nature of the subject, the research methods that are appropriate, and the important disciplinary knowledge that students should be developing while they are also developing critical thinking and research skills. We ask instructors to consider characteristics of their students, looking at demographics of UNLV as well as survey data that we have access to regarding students' confidence in different skills. Finally, we ask instructors to consider their own characteristics as teachers: What are their preferred modes of instruction, and how effective are those modes?

Identify Learning Goals/Purpose

Dee Fink describes this step as identifying learning goals, and in the Transparency framework it is described as defining the purpose of the course or assignment. We identify learning goals at a few different levels: What do the instructors hope that the students know or do five years after the course? What do they want students to know or do by the end of the course? And what should students know and be able to do by the end of the research assignment they are working on? We have used Fink's Taxonomy of Significant Learning (Appendix 20A) as well as Bloom's Taxonomy (Appendix 20B) to inspire thinking about learning in different ways—beyond recall and memory and into the realms of application and synthesis.

It is helpful to start with the big, future goals so that instructors are thinking about student learning beyond the scope of their own class. What will students need to take to the next class in their major? Or what will they need in their professional lives that they have taken from this class? Aligning the five-year goals with the course goals and the assignment goals is a powerful exercise, and has redefined many instructors' thinking. Instructors write their goals alongside librarian partners and then they share the goals with the entire group at the Institute. The cross-disciplinary nature of the Institutes is both rich and valuable. Faculty members, experts in their field, benefit from the perspectives of outsiders who do not have the same technical knowledge or specific vocabulary. We ask faculty members to embrace the role of novice and question the expert about what goals mean. In the end, this makes the course and assignment goals more transparent to students, who are also novices in the field.

Feedback and Assessment Procedures/Criteria

The next step in Fink's model is feedback and assessment procedures, which aligns with making the criteria transparent. After identifying the purpose of

a course and an assignment, we work with instructors to consider how they will know that students have achieved the learning goals. Key questions here are, "What does good work in this area look like?" and "How good does the work have to be in order to be acceptable or exceptional?" It is also important to build in opportunities for self-assessment so that students can measure their own progress and consider the quality of their own work.

The Transparency project suggests making criteria as clear as possible through a rubric and through annotated examples of student work. Descriptive rubrics and annotated examples help prepare students for better self-assessment, as well as making evaluating and grading less time-consuming for the instructor. Students should certainly have access to all grading criteria from the beginning of the assignment, and may even participate in generating the criteria and standards.

Teaching and Learning Activities/Task

The final step in Dee Fink's model is to develop teaching and learning activities that will contribute to the learning goals identified, and the third part of teaching with transparency is defining the tasks or assignments clearly. One of the major precepts of the Transparency project is that when students are clear on the purpose and the task assigned to them, they are much more likely to be successful at reaching their goals.

Many assignment descriptions consist mostly of a description of the end product: it will be eight pages, double-spaced, Times New Roman font, and will be on a certain topic. But that type of assignment description does not give students many clues to the process they should undertake to create such an end result. We spend time in Faculty Institutes working with faculty to describe, in student-friendly terms, not just what the end result of their work will look like, but what steps they should take along the way and how the process is related to the purpose of the assignment: What are the skills and knowledge that students should be developing as they complete this task? Fink's taxonomy for learning outcomes even includes the opportunity to include affect (e.g., does the instructor want the students to care about the topic? And if so, what is a possible assignment or task and what criteria could be used to assess it?)

With the Transparency in Learning and Teaching model, we work to make in-class activities just as transparent as major assignments. With the major assignments for the course identified, we talk about the in-class activities that will help students build the skills they need to be successful on the major assignments. Transparency guides these efforts, as in-class assignments and activities should ideally have a purpose that is clear to students and

instructors, as well as a task that is clearly outlined and criteria that will let us know when the outcome is successful.

We brainstorm with the group to generate alternative ways of assessing students' critical thinking and inquiry skills: How can we observe those skills in ways other than a traditional research paper? Many instructors are interested in experiential learning activities, including service learning projects or internships. We have, over time, compiled a list of alternatives to the research paper that we share with institute participants (Appendix 20C).

Outcomes of Institutes

We have assessed the outcomes of Faculty Institutes at two levels. In terms of the outcomes for faculty, we see deeper collaborations between faculty and librarians, an increased demand for librarians providing face-to-face instruction, and faculty teaching practices are transformed to more clearly articulate purpose, task, and criteria. We have also evaluated outcomes for students by assessing student learning with a sample of student work from across courses and departments. We assessed the work with an adapted VALUE rubric (Appendix 20D), and shared the results with the instructors and with the campus office of assessment. In addition to providing value to departmental assessment efforts, this work shapes and informs library instruction practices as we see where, in general, students are doing well and where they need more development and support.

Lessons Learned

Through the work in Faculty Institutes, librarians at UNLV continue to develop their identities as partners in the assignment creation process and work to position themselves as expert consultants for teaching faculty in matters of information literacy rather than as service providers with the primary purpose of providing reference desk coverage, or teaching one-shot library instruction. While librarians continue to provide direct instruction, our preference and ultimate goal is to partner on course design. Librarians have a vested interest in the information literacy skills of students, but because these skills are taught and practiced throughout campus and often without the aid of a librarian, it is not possible to take complete ownership, nor would we want to. However, with this consultation model, librarians can be leaders of information literacy in an array of learning experiences in and out of the classroom. Librarians can and do provide a unique and valuable perspective on the development and scaffolding of information literacy skills because we see research practiced in a variety of disciplinary contexts and throughout

the student experience. Therefore, we have a keen understanding of where students encounter bottlenecks in the research process and where research assignments can address these bottlenecks in a scaffolded and supported way. Moreover, since information literacy is deeply intertwined with critical thinking and writing, all of these skills and abilities should be embedded across the curriculum and offered through a scaffolded curriculum. Librarians provide support to these related skills and abilities as well.

The Transparency in Learning and Teaching initiative is also rich for librarian expertise because we are often faced with the task of interpreting research assignments to students in one-shot instruction or through individualized instruction the reference desk. This practice provides us with valuable tools we can use to work with faculty to create transparent language for assignments that resonates with students and provides a clear path to success.

As a result, the growing role of librarian as instructional designer helps to situate us as leaders at the nexus of research and teaching and learning on campus. This model also helps librarians to build more robust collaborations with teaching faculty and administration in an effort to raise our campus profile from service provider to partner.

One of the crucial lessons learned from the Institutes is that teaching faculty thrive in an environment where they can speak to one another about teaching and learning practices. Feedback from faculty highlights their appreciation for the designated time and space to develop their assignments or courses with colleagues from a variety of backgrounds. The diversity of backgrounds helps faculty to realize that, though courses and assignments can look vastly different, the instructors often encounter the same challenges and share many of the same goals for teaching and learning. This common ground serves as a catalyst for meaningful discussion around institutional priorities, innovative instructional pursuits, and student success. The variety of perspectives also helps to improve the clarity and purpose of the assignments because faculty must explain the motivation behind their pedagogical choices to those who are unfamiliar to the tenets of the instructor's discipline. This often leads to more transparent and purposeful assignments or classes. The interdisciplinarity of librarianship makes us strong collaborators and pertinent facilitators of larger conversations about pedagogy. To that end, the Library serves as a functional and fertile space to foster dialogue and collegiality among faculty. Because we are a unit on campus that serves everyone, we are also poised to provide a non-partisan platform for discussion between faculty and administration about big-picture conversations, like developing the lifelong learning skills of our students or meeting the educational mission of the University.

One linchpin to the success of the Faculty Institutes has been the clear alignment with General Education reform. Without the need for faculty de-

velopment in course and assignment design fueled by the reform, our path would have been different. Libraries have offered workshops for faculty on assignment design in the past, but attendance often fell short because there was not a pressing need for faculty development in this area. The ultimate success of any faculty development program is its relevance to instructors—the experience must help them address a perceived need. Because we connected our expertise with the Inquiry and Critical Thinking UULO, and identified a pressing need in the context of General Education reform, we captured the interest of faculty as well as the support of the administration. In short, wherever there is curricular change on campus, there is often need for faculty development. Where there is a need for faculty development, there is an opportunity for librarians to lead.

In addition to developing leadership skills in teaching and learning, the Institutes have been a vehicle for librarian leadership in student learning assessment efforts. Because librarians collect student work from the each of the Institutes, we have the opportunity to evaluate our students' mastery of the Critical Thinking and Inquiry UULO. This is a tremendous service to campus as well as to individual faculty participants. For example, librarians have examined student work from several courses taught by faculty who participated in the Faculty Institute for the Milestone Experience. Librarians developed a systematic approach for evaluating the work using variations of the AAC&U VALUE Rubrics for critical thinking and information literacy and shared the results with the teaching faculty for those courses as well as the UNLV Office of Academic Assessment and of the Office of the Executive Vice President and Provost. These assessment initiatives have been some of the first used to evaluate the new General Education model at UNLV and have strengthened the reputation of the Libraries as educational leaders on campus.

Adapting or Customizing this Idea

When we talk with libraries and librarians about this model of library instruction, they often express two main concerns for why it would "never work" at their institutions: either they 1) don't have a general education program; or 2) faculty do not see librarians as partners and/or librarians do not see themselves as experts in assignment and course design.

For librarians at institutions that do not have a general education program that they can tie themselves to, there may be another hook that could be useful for planning faculty institutes. Faculty will attend a workshop if they believe it will help them solve a problem or address a perceived need. Institutions will support faculty development initiatives if they are aligned with and help a campus instructional priority be successful. In other institutions, that

need might be expressed as expanding online education, embedding global or multicultural learning experiences, scaling opportunities for undergraduate research, improving retention and graduation rates, or preparing for accreditation. Almost any specific campus priority could be a point of entry—a potential "hook," per se—for a library to sponsor or co-sponsor a faculty development initiative that would meet campus needs and provide an opportunity for faculty and librarians to work closely together. The important thing is to think about campus priorities and then consider how the library can help the campus succeed. For any of the priorities listed, faculty development is necessary and the library and librarians can contribute. Furthermore, libraries often have their own community supporters and donors who can be directed to support classroom innovation. Partnering with a teaching center, for example, library donor funds can be used as an incentive for internal grants to instructors to partner with librarians on some aspect of course redesign. Regardless of the size or type of institution, faculty development can be a major part of meeting campus goals, and the library can play a leading role.

The second challenge, where librarians may not be in a position to partner or lead on faculty development, is in part an issue of campus culture, but also in part an issue of how librarians perceive and present themselves. Librarians can initiate relationships by inviting other campus partners interested in curricular issues, to join with them to provide more robust support to faculty. Potential partners are institution-specific, but always start with a teaching center, online education, office of assessment, and perhaps offices for first-year experiences or writing across the curriculum. Librarians are as skilled in teaching as faculty are, and perhaps more so. Our professional organizations have been offering rich professional development opportunities in instructional design for more than twenty years. Graduate programs in library and information science provide courses in teaching and learning. How many other disciplinary faculty have teaching and learning as part of their graduate education and ongoing professional development? Sometimes the extreme service mentality of librarians gets in the way of presenting ourselves as equals in the educational realm.

Conclusion

Librarians bring much to the table and are capable of helping to manage campus culture and assume leadership roles as educators. We are the only part of campus that participates in all aspects of student learning—in course development, direct instruction to students in and out of the classroom, faculty professional development, and intentionally designed co-curricular experiences. As discipline-neutral educators with strong facilitation and process skills, librarians are capable of being leaders, if we allow ourselves to be.

Appendix 20A: Fink's Taxonomy of Significant Learning[17]

Foundational knowledge
- Understanding and remembering:
  - ► Information
  - ► Ideas

Application
- Skills
- Thinking:
  - ► Critical, creative, and practical thinking
  - ► Managing projects

Integration
- Connecting:
  - ► Ideas
  - ► People
  - ► Realms of life

Human dimension
- Learning about:
  - ► Oneself
  - ► Others

Caring
- Developing new
  - ► Feelings
  - ► Interests
  - ► Values

Learning how to learn
- Becoming a better student
- Inquiring about a subject
- Self-directing learners

Appendix 20B: Bloom's Taxonomy[18]

Remembering	Understanding	Applying	Analyzing	Evaluating	Creating
Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers.	Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas.	Solve problems to new situations by applying acquired knowledge, facts, techniques, and rules in a different way.	Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations.	Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria.	Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions.

Appendix 20C: Alternatives to the Research Paper

Adapted from materials developed by the University of Newfoundland, University of Michigan, University of Puget Sound, Gustavus Adolphus College, Kings College, and the University of California at Berkeley.

Anatomy of a term paper
Conduct the research for a term paper. Do everything except write it. At various stages, students submit: 1) topic clearly defined; 2) annotated bibliography of useful sources; 3) outline of paper; 4) thesis statement; 5) opening paragraph and summary.

Annotated bibliography
Find a specified number of sources on a topic and write descriptive or evaluative annotations for each source.

Abstracting an article or book
Read and prepare a summary of an article, chapter, or book.

Literature review
Review the literature on a specific topic for a given time period.

Update a bibliography or review article
Select (or assign) a bibliography or review article written a number of years ago and update that bibliography or review article and explain briefly why the new publications were chosen.

Poster session
Research a topic and present it as a poster that other students will use to learn about the topic.

Examining a classical work
Explore through book reviews, biographical information, and indexes how and why a work becomes a "classic." What effect does a classical work have on a discipline?

Following research trends
Select a present-day issue or concern. Search the past literature at five or ten-year intervals. How have theories or attitudes toward the issue changed?

Tracing a scholar's career
Students choose (or are assigned) a scholar/researcher. Explore that person's career and ideas by locating biographical information, preparing a bibliography of the scholar's writings, analyzing the reaction of the scholarly community to the researcher's work, and examining the scholarly network in which the scholar works.

Understanding primary sources
Compare and contrast primary and secondary sources on the same topic. Contrast the sources, their content and treatment of the topic.

Compare and contrast sources
Locate a popular magazine article, then find a scholarly article on the same subject. Compare the two articles for content, style, bias, audience, etc.

Autobiography and secondary sources
Choose an autobiography of someone related to the course content. Find secondary sources that deal with an idea or event described in the autobiography. Compare and contrast the sources.

Simulations of real-life projects
Prepare a grant or research proposal, marketing or business plan, or solution to a tax, accounting, or financial problem. State the specific problem to be solved or task to be accomplished. Provide background on the problem. How have these issues been dealt with in the past? What is the current thinking on this issue? How do you propose to solve the problem or what are the questions you need to ask to solve the problem? What support can you offer for your solution?

Research a company or organization
Assemble background information on a company or organization in preparation for a hypothetical interview.

Create an interview
Have the class prepare an interview—either one to be actually carried out or one that they can't because the subject is long dead or otherwise unavailable. To generate useful questions, they would have to become familiar with the person's life and work and understand its significance. They could either write up results of a real interview or write their own imaginary responses based on available evidence.

Investigation of a disease and prescribed treatment
In biology or health classes, assign each student a "diagnosis." Have them act as responsible patients by investigating both the diagnosis and the prescribed treatment. Results presented in a two-page paper should cover: a description of the condition and its symptoms; its etiology; its prognosis; the effectiveness of the prescribed treatment, its side effects, and contradictions, along with the evidence; and, finally, a comparison of the relative effectiveness of alternate treatments. This can also be accompanied by oral or visual presentations, slideshow, poster session, etc.

Look behind the book
Examine the credibility of a major monograph in the field. Who wrote it?

What are the author's credentials? What is the point of view of the book? Find three reviews of it and compare them. Suggest comparable works (with reasons).

Analyze the argument
Read an editorial and find facts to support or refute it. Cite sources.

Compare book reviews
Locate and read [three, four, etc.] reviews of a work. Do the reviews vary? If so, why? What viewpoints, biases, or assumptions do the reviewers exhibit?

Write a book or film review
Review a book/film (either of the students' choice or one assigned to them). What is the author's thesis? Identify the author's main ideas and how they are developed? Discuss the author's credentials. Compare the book/film to similar works in the field. A film can also be compared to its source, e.g., a book or a play.

Examine coverage of a controversial issue or event
Examine the treatment of a controversial issue or event in several sources (newspapers, editorials, magazines, scholarly journal, journals from different disciplines, etc.)

Research and summarize a significant year
Have the class develop a snapshot of a year that is significant for your course. Starting with a chronology (such as Timetables of History), have groups report on politics, the arts, science and technology, or whatever categories make sense for the course.

Write a newspaper article
Write a newspaper story describing an event (political, social, cultural, whatever suits the objectives) based on their research. The assignment can be limited to one or two articles, or it can be more extensive. The assignment gains interest if several people research the same event in different sources and compare the newspaper stories that result.

Letters or diaries
Have students examine texts written by a figure discussed in class, generate questions from those primary sources, and prepare an annotated version of the text that answers or provides speculation on aspects of the text that are unclear. This could be a group project, with a set of letters or diary entries distributed among the class.

Create an infographic or cartoon
Have students display their research or reflect on their research process through creating graphics or images.

Appendix 20D: Rubric Used to Assess Student Work from Milestone Experience Courses

Adapted from AAC&U VALUE rubrics for Critical Thinking, Inquiry/Analysis, and Information Literacy

	Exemplary 4	Competent 3	Developing 2	Beginning 1
Explanation of issues	Issue/problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/or backgrounds unknown.	Issue/problem to be considered critically is stated without clarification or description.
Selecting and using information	Information is taken from source(s) with enough interpretation/ evaluation to develop a comprehensive analysis or synthesis.	Information is taken from source(s) with enough interpretation/ evaluation to develop a coherent analysis or synthesis.	Information is taken from source(s) with some interpretation/ evaluation, but not enough to develop a coherent analysis or synthesis.	Information is taken from source(s) without any interpretation/ evaluation.
Investigate a point of view or conclusion	Viewpoints of experts are questioned thoroughly.	Viewpoints of experts are subject to questioning.	Viewpoints of experts are taken as mostly fact, with little questioning.	Viewpoints of experts are taken as fact, without question.

	Exemplary 4	Competent 3	Developing 2	Beginning 1
Evaluate information and its sources critically	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.
Analysis	Organizes and synthesizes evidence to reveal insightful patterns, differences, or similarities related to focus.	Organizes evidence to reveal important patterns, differences, or similarities related to focus.	Organizes evidence, but the organization is not effective in revealing important patterns, differences, or similarities.	Lists evidence, but it is not organized and/or is unrelated to focus.
Conclusions	States a conclusion that is a logical extrapolation from the inquiry findings.	States a conclusion focused solely on the inquiry findings. The conclusion arises specifically from and responds specifically to the inquiry findings.	States a general conclusion that, because it is so general, also applies beyond the scope of the inquiry findings.	States an ambiguous, illogical, or unsupportable conclusion from inquiry findings.

Notes

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17. Fink.
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