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Combining Academic Service-Learning and Information Literacy: a New Framework for an Introductory Women's Studies Course

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COMBINING ACADEMIC SERVICE-LEARNING AND INFORMATION LITERACY: A NEW FRAMEWORK FOR AN INTRODUCTORY WOMEN'S STUDIES COURSE

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HALLE LIBRARY

Solange Simões and Suzanne Gray's work is collaborative in every sense of the word – a sociologist with a joint appointment in women's and gender studies has collaborated with a faculty librarian to study how students learn to write better papers, and engage more deeply with the course material, in an introductory women's and gender studies class. Students engaged in academic service-learning and in exercises intended to improve their information literacy skills as part of the class. Solange and Suzanne explore whether these activities helped students develop stronger ideas for term papers and do a better job using appropriate sources, and using them skillfully, in the term paper.

As they note at the beginning of their chapter, Solange and Suzanne face a particular challenge in this class; the topics they study, such as reproductive rights, sexual assault, and eating disorders, are ones in which students may have, or know someone who has had, personal experiences. While these experiences may make it easier for students to relate to the topic, they also run the risk that students will be unable to leave the world of anecdote and engage in more scholarly reflection and analysis of these issues. Thus, it is particularly heartening to see Solange and Suzanne bring forth multiple sources of evidence to demonstrate

that what they did in the class helps students emerge as more capable scholars. By the end of the course, students have learned skills for managing information, and for relating what they observe to what they study in an effort to triangulate from different sources and become better creators and consumers of knowledge.

The Research Problem

Teachers of the social sciences, and women's and gender studies in particular, are often faced with a specific challenge related to the nature of the object of study. An epistemological specificity of the social sciences is the partial identification between the object of study and the investigator, which leads to controversies over objectivity/neutral-ity and the role of subjectivity in the production of knowledge. These epistemological and methodological disputes have been focused on the production of knowledge by the social scientist, but their impact on the acquisition of knowledge by the student of social sciences has yet to be properly addressed. Given that students are simultaneously the learners and the "learning object", it would seem that personal experience would almost necessarily foster deeper understanding, but more often than not it can also hinder the use of what C. Wright Mills (1954) called the "sociological imagination." Reductionism and overgeneralization are not the only likely faults of ordinary knowledge – students often resort to the use of common sense and opinion as a substitute for the readings and critical reflection on social science theory.

This is a problem in the teaching and learning of social sciences in general, and we would like to argue that it is even more problematic in the case of women's studies. In women's studies courses, a feminist approach to teaching regards reflections on personal experiences as a powerful tool for learning. It follows that formal lectures are often replaced by group and class discussions, and journals are a common course requirement. We have used this approach and appreciate the learning enhancement it allows, but we have also been confronted with its limitations. For example, everybody has an opinion on eating disorders, body image, violence against women, or the right to choice on abortion. These strong opinions foster learning as well as limit it. Personal experiences should allow students to relate to scholarly texts; in the course, however, experience is sometimes used as a substitute

for scholarship.

When assigned the task of writing a research paper, students in introductory women's studies courses often resort to common knowledge. They rely on non-scholarly and unreliable sources available via the Internet. The current nature of the topics usually addressed in introductory women's studies course and the level of students' research skills result in projects and papers that lack quality and academic rigor. Because of the interdisciplinary nature of women's studies, the processes of narrowing a topic down and selecting relevant information sources for research can be even more challenging.

Our research problem addresses the need to develop teaching and learning strategies in women's studies that combine experiential learning with scholarly research. We wanted students to approach experiential learning as both the personally experienced in one's daily life as well as the directly observed in larger social contexts. We also wanted them to learn how to conduct a scholarly literature review to obtain additional knowledge that would allow them to critically reflect on the experienced and the observed.

We expected that the results of these strategies would allow women's studies students to move beyond conventional wisdom, relating their personal experiences and observations to more scholarly, informed reflections on structured inequities and social issues. Furthermore, we would expect this teaching approach combining theory and active learning to take students beyond ordinary knowledge and in the direction of significant learning (see Fink 2003), while developing cognitive skills such as critical thinking and inspiring life-long learning.

Framing our Research Problem

Our research problem led us to develop a theoretical framework combining literature on the scholarship of teaching and learning, feminist pedagogy, information literacy (IL), academic service-learning (AS-L), and the concept of significant learning experiences. We began with a general hypothesis that combining academic service-learning and information literacy would impact student learning. Our initial research questions were also framed by our interdisciplinary collaboration. We were both working with women's studies, one as a

Women's and Gender Studies (WGST) faculty member and instructor for the course Introduction to Women's Studies (Simões), and the other as faculty librarian assisting the Women's and Gender Studies Program (Gray). In the last two years we have collaborated and developed common concerns related to teaching women's studies at EMU. These were fostered by being Fellows in a semester-long seminar on course design that revolved around Fink's (2003) paradigm of significant learning experiences. Simões also became a Fellow in academic service-learning, while Gray became involved in various information literacy projects. We both sought to address challenges that limit significant learning for EMU's diverse student body. We drew on the literatures noted above to design the teaching strategy for a pilot in the winter term 2008.

Feminist Pedagogy and Introductory Women's Studies Courses

The teaching of introductory courses in women's studies has been framed by, and has contributed to, developments in feminist pedagogy. Feminist pedagogy strives to develop less hierarchical relationships in the classroom and is characterized by interactive learning, student responsibility for creating knowledge, class participation and sharing as key factors in constructing both the learning environment and course content. Instructors in the field have shared our specific pedagogical concerns with the teaching of introductory women's studies courses for years. As Winkler and DiPalma noted, "while the introductory class has developed along with scholarly research in women's studies at large, students continue to expect it will deal with their common-sense concerns about work and family, relationships, sexuality" and other women's and gender issues (1999, 5). Furthermore, many students "arrive informed only by media presentations of women and women's issues, and guided by talk show formats or attack interviews as standards for behavior in the classroom" (1999, 4). This has often led students to question or lack appreciation for the scholarly content of introductory courses and the feminist pedagogy used.

In her article discussing questions posed by students in introductory classes, King argued that the question posed by one of her students – 'Is this course just about opinions or what?' – could be seen as challenging, besides the instructor's credibility, "the field of women's studies as a legitimate mode of discourse and scholarly inquiry" (1999, 89). The author noted that these students need:

an answer that contextualizes women's studies as a scholarly field of endeavor. They need an authentic response that both differentiates women's studies and the pedagogical processes it uses while at the same time links or places these processes within the context of learning (89).

This challenge is one of the main sources of inspiration for this study.

Another major concern is how to work with students in introductory classes to make the connection between personal and social experiences. Incorporating activism into women's studies classes has long been one of the feminist teaching strategies addressing this issue. Activism is often broadly defined, encompassing performance of community service or advocacy on women's issues. However, the activities are not necessarily related directly to course topics. Although such activities are legitimate and often significant for citizenship learning, they do not explicitly tackle the issues the course sought to address. In this study we created teaching strategies that facilitated students linking their personal experiences and social observations to a scholarly context. To this end, we turned to academic service-learning to provide a basis for student social experience and observation.

Academic Service-Learning

In contrast to typical forms of volunteerism, activism, internship, field-education and community service, academic service-learning (AS-L) is defined as students engaging in community service that is both related to the content of a course and framed by specific community needs (Furco 1996). Rice pointed out that service-learning is a collaborative process: "Many partners are needed to create valuable experiences that effectively serve the community, the institution and students" (1996, 14). Myers-Lipton (1996), in turn, saw service-learning as stemming from critical social theory in sociology of education:

When students have the opportunity to interact with various groups of people (e.g., people from different socio-economic backgrounds and sub-cultures), and then reflect critically upon the meaning of those interactions... service-learning students are clearly active agents in their own learning process (22).

This conceptualization of academic service-learning, which we view as converging with feminist pedagogy, was pivotal to our design of an observational component that connected course topics to students' personal and social experiences.

We also related academic service-learning to a framework for creating "significant learning experiences." Fink (2003) proposes a paradigmatic change from a focus on teaching to a focus on learning. In his model, a significant learning experience has both process and outcome dimensions. The process dimension is characterized by students' engagement in their learning and high energy levels in class. Two major outcomes emerge from the experience: significant and lasting change that becomes part of life-long learning, and value in life carrying the potential to enhance students' lives as individuals, as well as prepare them to participate in diversified communities and for the world of work. These concepts clarified some of the learning outcomes we sought to meet.

Information Literacy

The other major frame for our study is information literacy, which we combined with AS-L. Information literacy has become a distinct focus in many academic libraries as a response to the complex information environment driven by developments in information technology and exponential increases in the sheer volume of published material. For the purpose of this course, we used the definition developed by the American Library Association Presidential Committee on Information Literacy. They declared that those who are information literate "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information" (as cited in Association of College and Research Libraries 2000).

We also used the Information Literacy Competency Standards for Higher Education. According to the ACRL, an information literate college student is able to:

- Determine the extent of information needed;
- Access the needed information effectively and efficiently;
- Evaluate information and its sources critically;
- Incorporate selected information into one's knowledge base;

- Use information effectively to accomplish a specific purpose; and
- Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally.

These outcomes must be addressed throughout the curriculum in collaboration with teaching faculty across the disciplines. Active learning and teaching research as process are integral to lifelong learning. Like these information literacy outcomes, Fink's (2003) framework for significant learning identified both learning how to learn and the application of foundational knowledge as two of the six primary categories of significant learning. The research process requires both the discovery of foundational knowledge in a discipline and its application to a question or topic of interest. Students learn how to learn in an information literacy context by better understanding how information is disseminated and managed in a discipline, which is a more complex task in women's studies due to the interdisciplinary nature of the field.

Research Objectives and Hypotheses

In this project, we sought to develop and test a new teaching strategy for WGST 200 – Introduction to Women's Studies. This is the introductory and "signature" course for the Women's and Gender Studies Program at Eastern Michigan University. It has been taught since the mid-1970s and was recently approved as an offering in the US Diversity category of EMU's new General Education Curriculum. Approximately 16 sections, with a capacity of 30 students each, are offered every fall and winter term, with a total of almost 500 students enrolled per term.

The pilot for winter term 2008 involved five sections of the course, which were taught by four different instructors. For the purpose of this paper, we focus on the analysis of data for the section taught by Simões. The section under study had 24 students – 20 female and 4 male students; 13 first-year students, 6 sophomores, 3 juniors and 3 seniors – all of whom completed the course while participating in AS-L.

The course introduces students to diversity in the United States

by examining the lives of women from diverse racial/ethnic and class backgrounds. It explores constructions of difference—whether based on race, ethnicity, gender, sexuality, or class—and helps students understand how these constructions have been and continue to be fundamental to life in the US. We developed a pilot to in one section during winter 2008, in which we explored three main hypotheses:

Hypothesis 1: Students' learning will be correlated with the students' performance in academic-service learning and the quality (context and content) of the experience.

Hypothesis 2: Students' learning will be correlated with students' performance in the information literacy component.

Hypothesis 3: Students' learning will be correlated with how academic-service learning and information literacy were combined and how well students combined them.

We defined the dependent variable “students' learning” as a) moving beyond common sense by combining observations and reflections informed by scholarship; and b) engendering significant learning, in the sense of critical reflection, values and attitudes conducive to lifelong learning.

Instructional Design

The Academic Service-Learning Component Design

One of the main challenges for the feasibility of integrating AS-L was the fact that WGST 200 was an introductory course taken mostly by first- and second-year students. How would beginning students provide community service related to the course content if they did not have any expert disciplinary knowledge? By clarifying the definition of academic service-learning as the outcome of the experience we understood that specific knowledge does not need to be applied in the field. The other related concern was whether the performance of routine clerical or manual tasks performed in various organizations could enable academic learning.

While the organizations dealt with women's issues – such as reproductive rights, health, domestic violence, or political representation – would the students relate these issues to their research? This

was a more challenging question. Besides envisioning the academic service-learning experience as a site for observation of issues covered in the WGST 200 course, we imagined it could also be a major source for the gathering of specialized information and data. We expected conceptual and theoretical understanding of women's issues to emerge from the service, as they were experienced first hand, allowing students to evaluate the claims about gender relations in the larger society.

In the fall 2007 term, we built a network of agencies and organizations in which our students would be placed to provide service that would be directly related to one of the topics covered in the course. We met with the agencies in order to discuss how we could work together, providing service relevant to them while at the same time allowing our students to make on-site observations and get hands-on experience that they could then use as they reflected on course topics. We required ten hours of service from the students, which were preceded by a training session. A graduate assistant and the course instructor supervised placements throughout the term. The graduate assistant also worked as a liaison between faculty, students, and participating agencies and organizations.

The Information Literacy Component Design

To better provide support and scaffolding for the research paper, we revised and substantially expanded the information literacy content in the course. Our information literacy pedagogy was designed to answer the following questions:

- What skills might students learn in the context of this course that would help them to learn more about women's studies topics in the future?
- What will help students to improve the quality of their research papers and projects, not only within the context of this course, but also in the rest of their college experience?

We offered more support in the research process by devoting three course sessions to targeted information literacy instruction and work on the literature review, as opposed to the single IL session that had been offered previously. We supported their writing by emphasizing that working on the paper is something that should be done

throughout the term, as opposed to only the final weeks of the course. We also reinforced the connection between the service learning experience and the research process throughout the term, particularly in reference to topic selection for the project. Assignments were completed prior to the library sessions to expose students to the material. Sessions were based on questions that students had about what was covered in the preparatory materials. Assignments were completed after each session to ensure that students were engaged in the process of research, and to evaluate the extent to which they absorbed the content that had been presented, and applied it to the project at hand.

The primary learning outcomes that we addressed for the revised information literacy curriculum are listed below. We hoped that by the end of the course, students would be able to:

- Apply a model to a research project in order to develop their own process model and apply it in the future;
- Describe the interdisciplinary nature of women's studies and how that affects the information search process so that they can continue to research topics in the field that interest them in the future;
- Identify the role of the library's faculty members in assisting students with research projects, and utilize library services when needed;
- Identify scholarly literature, how to distinguish it from other types of writing, and why it might be useful to use in a research project;
- Develop and apply strategies for narrowing a topic so that it can be adequately covered by the length of paper assigned;
- Distinguish between the general Web and library resources;
- Develop and apply criteria to evaluate information sources.

These were addressed through in-class learning activities, assignments, and preparation prior to class. Key content included an introduction to the basics of using the library and library search tools, topic selection, source evaluation, and the relationship between academic disciplines and topics in women's studies.

The framework of the information literacy component of the course enhancement is based on Elmborg's idea that teaching research

as a process rather than as a product moves us to a “radical revisioning of what it means to be a college researcher” (2000, 73). In order to facilitate student discovery and development of a research process of their own, we presented an existing framework as a model and suggested that students might develop their own processes or use the example as a model for the purpose of this research project. Carol Kuhlthau’s (2004) model of the information search process was used because this model explores not only proposed steps in the process, but also students’ affect when moving through these steps. As a result, it has the potential to be used also as a tool for emotional support in the face of student anxiety with the research process. The model was revisited during each library session to “check in” with where students were in the process. The intent was to keep students on track and engaged with research throughout the term, and to better manage the emotional aspects of undertaking a large, complex project.

Data Collection and Evaluation Methods

A number of instruments were used to collect the data to measure student learning, the independent variable in our study. Evaluations were conducted by the instructors, the graduate supervisor, and the students themselves. Each research hypothesis was tested through the combination of a number of evaluation instruments:

- 1) The impact of AS-L on student learning was evaluated through the research paper and a structured reflection paper on the AS-L experience. The quality and context of the experience for each student was assessed by the graduate supervisor and through students’ oral presentations. This information was taken into account to understand if student performance was fostered or limited by the quality and content of the AS-L activities and organization.
- 2) The impact of information literacy on learning was evaluated through the research paper and a structured reflection paper on the IL experience (questions for the IL reflection paper are listed in the Appendix).
- 3) The combined impact of the AS-L and IL experiences on learning was evaluated through the research paper, and through

questions on the AS-L and IL reflection papers that addressed the interplay between AS-L and IL and how this shaped the paper.

A main source of evaluation of student learning was the research paper combining what students learned about information literacy and in the academic service-learning experience. Following the research as process approach, the research paper included two supplemental library research assignments. Adding to that, oral presentations of their work served as a mechanism for feedback by the instructor and classmates, as well as a tool to explain, clarify, expand, and validate the content of the research paper and reflection papers.

In the oral presentations students were instructed to talk about a) the literature research they conducted on their chosen topic; b) their service-learning experience; c) how their academic service learning helped them better relate to, get interested in, and understand their topics; and d) how the literature research helped them better understand or reflect on their academic service-learning experience. The context constraining learning was taken into account through the graduate supervisor's evaluation of students' performance (attendance and commitment) to the academic service-learning and the graduate supervisor's evaluation of the organizational performance (activities planned and implemented with the students).

Findings and General Discussion

We hypothesized that three independent variables – the provision of academic service-learning, the provision of a revised information literacy curriculum, and their combination – would positively impact student's learning. Given the exploratory character of our study, design limitations and the implementation constraints, rather than quantifying how much students learned, our data will shed light on what and how students learned:

- How did our proposed teaching strategies foster learning beyond common sense?
- What kinds of learning were facilitated by our teaching strategies?

Mediating Factors: The Content and Context of the AS-L Experience.

Our first hypothesis stated that students' learning would be correlated with students' individual performances in academic-service learning, with the quality (context and content) of the experience as mediating factors. When evaluating the context in which students did their AS-L we took into account the activities selected and implemented, training, support or monitoring provided by the organization, and time allowed for completion of hours. The twenty-four students in Simões section completed the ten hours of AS-L.

Most of the activities planned – such as promotion and advocacy of the organizations around campus, fundraisers, event organization, educating about the services provided, public speaking, getting people to sign petitions, or working with children – were implemented, and a few new ideas came up in the process.

None of the constraints we found in working with the organizations seem to be due to a bad fit between our F objectives and the kinds of service that could be performed for the organizations. This had been our major concern for the feasibility of the project. However, in order to have the service provided in a timely fashion to allow for feedback mechanisms between the literature research and observations and data collection through AS-L, planning and close monitoring of the development of the services provided was needed. A successful AS-L experience requires dedicated time throughout the term from the instructor and/or a graduate assistant. This is an especially important factor, given that our findings on the context and content of the AS-L pilot show that in some cases the constraints were related to time and personnel availability in the organizations for supervision of student service.

The students' comments in the oral presentations corroborated the graduate student field placement supervisor's evaluation of the organizations in so far as they converged in the strengths and limitations pointed out. Despite some organizational constraints, the great majority of students ended up not only enjoying their experiences but also learning in many significant ways, as will be shown in the remainder of this paper.

In a comparative analysis of the impact on learning by each type of organization, we found that in most organizations students'

learning was impacted similarly. Feedback from the organizations is planned for the summer. Of course, it is also very important to get feedback from the organizations on what went right and wrong, what we learned in the pilot, and how collaboration could be improved in the future.

Dimensions of Academic Service- Learning

We assigned a reflection paper to obtain feedback on the AS-L experience and its relationship to learning in the course. In these reflection papers, students answered eight questions that probed what they did and learned through AS-L, with a special focus on the relationship between AS-L, their research topic, and their literature search. We chose a structured reflection paper as opposed to a more conventional journal in order to avoid students describing the experience without relating it to class content and their research topics. This is a strategy recommended by scholarly reflections on AS-L suggesting “that conceptual questions directly tied to the course content be explicitly presented in a reflection question” (Welch 1999, 23).

The initial analysis of students’ answers in the reflection papers allowed us to distinguish various aspects of learning fostered by AS-L:

- Information – AS-L worked as a source of reliable information, making topics known;
- Demonstration effect – AS-L made topics real;
- Hands-on experience – AS-L made topics observable;
- Communication and reflection – AS-L made topics interpretative.

These aspects of the learning experience we identified in our initial analysis appeared associated with the dimensions of learning engendered by AS-L as identified by the literature, such as change in cognition, behavior and values (Marullo 1996; Welch 1999). Drawing on those concepts we did a more detailed analysis of our findings identifying five related learning components: affective, experiential, reflective, civic learning, and lifelong learning. In Table 6-1, we summarize the findings for Simões’ section; below, we examine these learning components in the students’ own words. The Table clearly indicates that the AS-L experience has a significant impact on student learning.

Table 6-1: Impact of AS-L on Dimensions of Learning (as measured by the instructor’s analysis of students’ reflection papers)
 (n=22)

Dimensions of Learning	Impact on Learning			
	High	Medium	Low	Not Mentioned
Experiential Learning (Question 3)	19	3	0	0
Affective Learning (Question 3, 6)	20	2	0	0
Cognitive/Reflective Learning (Question 4, 5)	3	15	4	0
Civic Learning (Question 7)	21	0	1	0
Lifelong Learning (Question 3, 4, 5, 8)	13	0	0	9
Overall Learning (Question 8)	19	2	0	1

Note: dimensions of learning were coded from the questions answered by students in the reflection papers:

1. Why did you choose the organization you did service for? How much did you know about that organization? What were your expectations?
2. Please describe your academic service-learning experience – describe what you did, who you worked with, the tasks and the content of what you did.
3. What did you learn in academic service-learning?
4. How did your academic service-learning relate to your research paper? How did it help you understand your topic and write your research paper?
5. Conversely, how did your literature research help you in your service?
6. How did your service-learning impact you personally? Is there any specific event or thing that happened that you would like to tell about?
7. Did service-learning inspire you to do further service in your chosen topic or other areas related to gender issues?
8. Overall, how do you feel about your service-learning experience?

We defined the dependent variable “students’ learning” as a) moving beyond common sense by combining observations and reflections informed by scholarship; and b) engendering significant learning, in the sense of critical reflection, values and attitudes conducive to lifelong learning.

The findings for all components except for the Cognitive/Reflective category will be discussed in this section. Cognitive/Reflective learning will be covered in the section addressing our third hypothesis – the impact on learning of the integration between AS-L and information.

As Table 6-1 indicates, the AS-L experience had high impact on four out of the five components of learning. The high, medium and low categories were employed as measures of the strength and depth of the service experience's impact on student learning. High means the student clearly and directly addressed and related the class content and/or the research topic and their personal experiences to the learning dimension of the service activities under evaluation. Medium and low were categories comparative to the "ideal" high dimension.

1. *Affective learning.* The choice of words used by students to convey the overall impact of the academic service-learning experience acknowledged their feelings: fun, enjoyable, great idea, wonderful experience, exciting, adventurous, positive, valuable, slap in the face, wake up call, real, the coolest thing I have ever done.

Student quotes convey the strong impact of AS-L: "The experience in AS-L was unlike any other". A male student, who worked with the Girls Scouts and wrote about friendship among women, had this to say: "My service-learning was interesting and adventurous. It was a completely new experience for me and one that I will not forget." A student who worked with the Women's Center and did her research on sexual assault described an array of positive personal feelings summing up her AS-L experience:

Overall, my service learning experience was absolutely amazing. I wouldn't have changed a thing, and I'm so happy I chose to do my volunteer hours at the Center. I had such a good time and really enjoyed getting to know so many new people. I learned so much and I'm happy that I had the opportunity of doing the service learning hours.

In most cases students connected the feelings emerging in AS-L with raising their interest in the learning experience, making it meaningful and with a probable long-term impact. In a few cases students expressed how much they enjoyed the experience but questioned its value in terms of acquisition of knowledge relevant to their research

paper. However, these same students acknowledged in their reflection papers that they did learn many important things, even if not directly related to their topic.

2. *Experiential learning.* As Fink noted, significant learning entails the discovery of personal and social implications of what students learn. In active learning experiences “observing gives learners a chance to experience the reality of the phenomena they are studying” (2003, 105). Our findings lend support to those claims. At the same time that our students learned about themselves or their experiences they were also learning about social phenomena. They greatly valued the opportunity to learn in ways they defined as “hands-on” and “real.”

In the words of a student whose research topic was domestic violence: “By seeing things, it makes them more real.” This comment was widely replicated by students who did research on sexual assault. They had the opportunity to help organize and take part in the events of the Sexual Assault Awareness Month, especially the Take Back the Night March, during which students had the opportunity to interact and listen to the survivors of sexual assault.

A student who grew up in a household headed by a single mother and wrote a research paper titled “Stresses of Single Mothers and the Effects on Children,” talked about how AS-L allowed her to develop her “sociological imagination” connecting the personal and the social, and how observation improved understanding of the issue:

My service learning really affected me because I grew up in a single mother home and it made me realize that my brother and I were not the only kids going through hard times. It made me realize that many women are single mothers and that society needs to realize this and make changes accordingly. I feel that it really taught me a lot because you can always read the information on a page but it never becomes real until you actually see it for your own eyes.

3. *Civic learning.* The citizenship learning component related to the impact of AS-L on value change, creating tolerance and understanding of diversity and creating empathy with the victims of structured inequities (Marullo 1996). It was also related to the “human dimension” and “caring” categories in Fink’s taxonomy of significant

learning. As Fink noted, the special value in the “human dimension” category of learning is that it “informs students about the human significance of what they are learning.” Whereas the special value of the “caring” category is that “when students care about something, they have the energy for learning more and making it a part of their lives” (2003, 32).

Our students in AS-L did mention value and attitudinal change, coupled with an attitudinal disposition to personally engage in behavior that could help ameliorate social injustice. The evaluations of students speak very clearly and compellingly about this disposition for behavioral change and engagement in social and community issues:

Overall, my experience was very valuable. I could not have learned or experienced what I did inside of a classroom. I feel that service learning is a great idea because it gives the students something to care about, and if students care about what they are doing, they will enjoy their work more. I was very impressed with what service learning taught me and I would do it again.

I will absolutely be doing more with my chosen topic after this semester. I plan on volunteering next year at the Women’s Center again, and this summer I am looking into volunteering at the Safe House.

Several students did their AS-L experience with EMU campus organizations and valued learning more about the campus community, expressing an enthusiastic disposition to engage with campus centers and campaigns:

I absolutely loved being a part of this service learning. At first, when I heard we were going to be doing volunteer work I thought I would just be stuck handing out fliers. I was so pleased that we were allowed to play a larger part in planning the event (Women’s International Day). In doing so I felt closer to the cause it was celebrating and it made the whole situation much more personal. After my first experience doing service learning, I am excited to volunteer my time more. I would

most definitely love to be involved with helping to plan more events that celebrate women. I would love to become more involved first hand with a movement that I find so essential!

One student spells out how her AS-L experience enriched her understanding of diversity:

AS-L helped me to understand what the word ‘diversity’ is really all about. With all the different lifestyles and different religions, I had to learn to broaden my perspective when it came to both. There are a vast number of religious and sexual identities that people recognize, and there are unique aspects to all of them. The literature helped me to become more understanding of the people around me.

An exception to this generalized willingness to engage came from one student who related it to the disappointment she had doing all the service on campus and not getting even a “tour” of the organization headquarters. In fact this tour had been planned but never happened given the extremely busy schedule of the organization in the months students were doing their service hours. The student’s comments rightfully address her frustration for not being able to realize the learning potential that comes with being able to observe issues in a real-world context.

4. Lifelong learning. A key outcome of AS-L has been the fostering of interest in continuing learning beyond the course. AS-L has certainly unleashed this potential. This is one of the many comments on this dimension of AS-L:

I do think that service-learning is an excellent way for students to learn and retain information. I would strongly encourage this department as well as others to consider using this form of learning in the future. I would like to see maybe even more time given to service-learning. Thank you for the experience. I will consider doing observation in the future for any research project I may have. (Student doing AS-L with Michigan State Police and writing her research paper on women in law enforcement.)

Beyond the five dimensions of learning distinguished and illustrated above, AS-L also created an opportunity to develop a diverse set of practical skills such as public speaking, event organization, fund raising, petitioning and “tabling”(giving information and answering questions when staffing campus information tables). One student commented on the challenges and learning potential of small tasks:

A day before the event (Women’s International Day) I made sure I was out promoting it with flyers and pamphlets in the Pray-Harrod building. That was an experience in itself. I had never passed out flyers at a table before, but I had always walked by the people who did. I came to the realization that it can be very intimidating and can be hard to pass out flyers. But after the first hour I eventually lost my fear of going up to random students. After that not one person walked by without a flyer, I made sure that I got the word out about free food and great speakers.

The Impact of Information Literacy on Learning

Our second hypothesis was that students’ learning would be correlated with students’ performance in the information literacy component. The primary focus of the analysis of the overall achievement of learning outcomes in regard to the information literacy component focuses on an analysis by Gray of the final research papers. There were two additional library research assignments that were designed to assist students in developing the skills needed to successfully complete the research process, and a final reflection piece on the information literacy component of the course.

Assignments were made after each IL session to evaluate progress, but also to reinforce engagement with the research process throughout the term. The first assignment asked students to compare a document or webpage found through a general web search, such as Google or Yahoo, with an item located through a library subscription-based electronic academic reference book, encyclopedia, or an item found through a web portal. (These are sites that collect web pages that have been assessed and selected by reference librarians.) The activity was developed to assess whether students distinguished between

library or librarian-selected resources and the results of a general web search.

The second assignment was an annotated bibliography of at least six items that were read on the general research topic in which the student was interested. Students were asked to select either MLA or APA style and produce annotations that briefly summarized the items they read, and to explain why each one may or may not be of use to them in writing their paper. The purpose of this exercise was to insure that students had done some general reading on their topic prior to choosing a focus or developing a research question. It also allowed the librarian to provide specific feedback on what the student had found so far and make suggestions as to what other resources they might consider on their topic.

The final assignment was a one page reflection paper describing the student's research process, which was to be turned in with the final paper. This assignment reinforced the learning strategies that students developed over the term, and served as an assessment tool to determine what students had learned about the research process.

To assess the overall learning outcomes for the IL component of the course, the most significant data point was the analysis of the resources included in the students' final research papers and their reflection on their own research process. Gray analyzed the research papers, along with the bibliographies, to determine whether these artifacts evidenced significant learning in the realm of IL. Categories for analysis were developed from the learning outcomes for the course, and the papers were read and rated on each of these categories: source use and relevancy, topic selection, source quality, and use of scholarly sources.

Source use and relevancy. Table 6-2 summarizes how well students did in terms of source use and relevancy. For the most part, students experienced some success in integrating relevant sources into their writing. Those who integrated sources well showed clear links between their thinking on the topic and the thoughts of authors of the works cited. Those who were able to moderately integrate did include sources and attempted to summarize what they said. This indicated that they had read them, but failed to effectively integrate the authors' thinking into their own observations and conclusions. Those who weakly integrated sources relied heavily on a single source from the bibliography, or appeared to insert citations without a real tie to the

Table 6-2: Degree of Integration of Sources into Final Paper (n=24)

Well integrated	9
Moderately integrated	10
Weakly integrated	3
Not integrated	2

content. At least one student failed to cite a single source, and another cited only one from her bibliography in the research paper.

Topic selection. For the most part, students failed to substantially narrow the topic, or to develop a thesis question, despite the assignment of a tutorial on this topic, and their participation in an exercise and class discussion on how to narrow a research question. Most of the papers were similar to an encyclopedia article on a broad subject, such as eating disorders or violence against women. These topics were too broad for the length of the paper. Less than a quarter of the students sufficiently narrowed the topic for the length of the paper and developed some type of thesis question to answer in the context of the paper. Some of the narrowed topics with a clear thesis included the effects of intimate partner violence on survivors, the reinforcement of gender roles in children’s films, and the relationship between religion and the gay/lesbian community.

Source quality. Some measures of quality included reliability, age of item relevant to topic, credibility of authors, and bias. Gray did not look at all of the sources individually, but instead used her professional knowledge about publications to make determinations based on title, publisher, and type of publication. For web sites, she examined the domain name and checked them if they were unfamiliar or questionable. Most of the sources cited appeared to be appropriate for academic research at this level (see Table 6-3). Scholarly encyclope-

Table 6-3: Quality, for academic Research, of Sources Cited in Final Paper for Academic Research. (n=24)

Most are appropriate (65-100%)	13
Some are appropriate (35-64%)	3
Few are appropriate (<34%)	3
None are appropriate (0%)	1
Can’t determine	4

dias, journal articles, magazine articles, academic books, web sites for professional or advocacy organizations, and government documents were some of the examples of quality resources that were used. Some of the most interesting examples of inappropriate sources that were used included a PowerPoint presentation from a course instructor at a foreign university, a student's blog created as an assignment at another university, and Wikipedia (cited by one student despite the explanation given in class as to why it might be problematic).

Use of scholarly sources. The final research paper assignment required that the students use at least six scholarly sources in the works cited list. Clearly, despite the course activities and supplemental assignments, a large proportion of the students must have either missed it, or were not yet able to make the distinction between scholarly and popular sources (see Table 6-4).

Table. 6-4: Number of Scholarly Sources in Final Paper ($n=24$)

6 or more sources	4
3 to 5 sources	10
1 or 2 sources	3
0 sources	3
Can't determine	4

Evidence of additional significant learning from the reflection paper. Gray also evaluated the IL reflection worksheets on the research process. There was some indication from the IL reflection papers that significant learning had occurred in regard to understanding research as a process, distinguishing between web sites and library databases, and evaluating the quality of information sources. In the IL reflection paper, students were asked what they had done differently in this research project than what they had done in the past, and what they would do differently in the future. These questions revealed significant changes in research behavior.

Understanding research as a process. A number of students mentioned that they started their research process earlier than usual, and that they believed that it improved the quality of their papers:

I didn't do it in the last minute like before. Because of the library homeworks I had to work a little bit and pace myself,

and it helped me a lot when I was actually writing the paper. It was successful. Not doing it in the last minute gave me more time to think about this topic.

I learned a lot of things from this research process like how to use the Kuhlthau's Model. Using this model made it easier for me to write my paper. It helped me with time management and organization. I will be using this model again.

Distinguishing between web sites and library resources. For a significant number of students, this course was their first exposure to library databases, and they indicated that they would use them again in the future:

Using our library's scholarly resources is the new thing I learned. It is very useful and trustable. Before this class, I had no idea where to find scholarly information, but now I do and I will use it again.

I had never used the databases online to write a paper. Usually I would just google search something. During one or our library sessions we talked about how a lot of websites are not reliable sources. It made me think back to all the papers I had written where I had mainly used websites as my sources. I had never checked to see if they were scholarly or not. It was nice to learn how to spot a scholarly source. It was a lot more successful looking up things on the databases. It took a lot longer to do, but I think it made what I was saying more legitimate and more enjoyable to read.

Although the comments indicated that there seemed to be some confusion between scholarly resources and sources found in library databases, the focus on the quality of resources, whether or not students could clearly distinguish between scholarly and popular literature, is a positive step, and new information for a large proportion of the class.

The Combined Impact of AS-L and Information Literacy on Learning

Our third hypothesis stated that student learning would be

correlated with how academic-service learning and information literacy were combined and how well students combined them. One of our major concerns when we designed this pilot was whether the simple routine tasks students would perform in the AS-L experience would foster cognitive skills and knowledge relevant to their research topics. When analyzing her students' answers on the reflection paper, Simões was delighted to find that topic-relevant observations were made by students while "playing with children" at the childcare center, "babysitting" at girls scouts, "tabling," or passing out fliers.

The various AS-L experiences allowed for diverse connections with research topics. The students made direct research connections such as:

- Friendship among girls, while leading activities at Girls Scouts;
- Surviving sexual assault, while participating in Take Back the Night march;
- Dress styles in the LGBT community, while participating in LGBT events;
- Attitudes towards women in the police force, while going on a ride-along with female troopers.

Other AS-L experiences provided more indirect observations when students were studying:

- Gender roles in children's movies, while talking with children at the childcare center; or
- Girls' self-esteem, while helping at Girl Scouts

For some students, AS-L itself was a source of information for the research topic:

It gave me more of a background and more knowledge of what it is and it also gave me ideas of what I wanted to put in my paper. It showed me what was important for people to know and what important points I definitely wanted to touch on. It helped me better understand my topic because I really didn't know the facts about sexual assault and by doing my hours

there I learned the facts and more about the subject. I got a ton of literature from the Women's Center itself. I have a lot of pamphlets and handouts that I picked up from there that are very useful for my paper. Also, the information from the journals and books I have found has been very helpful as well. I have read more about sexual assault and rape and now I feel more knowledgeable about the subject in order to write my research paper.

In other experiences AS-L helped with ideas for the paper and narrowing the research topic:

My academic service learning was directly related to my research paper. It helped me to narrow down my topic from domestic violence to how to escape a domestic violence situation and the aftermath of the women and their lives. How they pick up the pieces and ways to prevent it from happening again. It really didn't help me understand my topic anymore than I already knew, but it did encourage me to research more thoroughly on my topic. It seemed this was a side of domestic violence that women rarely touch on.

Some students reflected about ways in which a feedback mechanism operated between AS-L and information literacy:

I am glad that I did the research before I talked to the women because it helped me know what questions to ask them and it gave me a little prior knowledge before I spoke with the women. Speaking with the single mothers also helped me understand more about my research and the information that I found from the databases. It helped make more sense of what I was reading.

My service learning made the statistics that I found in my research very real. It made the experiences that the research studies talked about more than just a research study. It gave me insight to what it was really like to be a single mother, the challenges they face and how it affects their children. It gave

me a better learning experience than I could have ever gotten just sitting inside a classroom.

But in a few cases, students, although enjoying and learning from the experience, could not make much connection between AS-L and the information literacy component:

It related to my paper in that it involved lesbians and bisexual women, but other than that it didn't help very much at all. It let me observe the styles of clothes that lesbians and bisexuals my age normally wear, but that's also where it ended in terms of usefulness. I feel that as an extra activity, it was very interesting and fun. But as a tool for my research paper, it was not very useful, and only took up time I could have put towards my paper.

The overall assessments of the experience were almost unanimously strong and positive:

I thought that doing the service learning was a great experience, and I think it should be implemented in more classes. It really gave a hands-on approach to your chosen topic instead of just reading articles and trying to write a paper. It put faces with problems and situations, and I think a lot of students used that to help them write a better paper.

So far we have reported on how students integrated AS-L and information literacy. In addition to using the student's own evaluations of their experiences, we also evaluated to what extent the interplay between AS-L and information literacy was reflected in their final research papers. Although several papers were well researched and written, there was only one paper that reflected an ideal interplay between theory and empirical observations. In her reflection papers on AS-L and information literacy, the student explains how the connection worked:

My AS-L related to my literature research because my paper was on friendship among children, and that was what I did

(observed) at Girl Scouts. My service helped me understand my topic more because I got to see firsthand what all the books were talking about. It helped me write my research paper because I could support what was said in the books with what I saw at Girl Scouts. My literature research helped me in my service-learning because it helped me understand what the books were talking about. I would read a chapter and not really understand what it meant, and then I would go to a meeting and see it happen, and it all came together.

One would have expected an “ideal” paper to be written by a student who had previously developed good research skills. Interestingly, however, this same student states:

I haven’t really done any other research papers in the past. I know that sounds bad, but in high school I never did any, and I am only a freshman, so it was my first one this year. But I would have to say that it feels right, it feels very successful.

We did learn from their reflection papers that the AS-L observations were a source of information, helping students with ideas for the paper and for narrowing down the research topic. Several students reported ways in which a feedback mechanism operated between AS-L and information literacy. As shown in Table 6-1 above, Simões analyzed the impact of AS-L on the cognitive/reflexive dimensions of learning as measured by the students’ reflection papers. In three cases the impact was rated as high, in 15 cases as medium, and in 4 cases as low. However, this articulation is not explicitly made by students in the final research papers. Except for a couple of cases, the final research papers did not show the integration of the two components. In their reflection papers the great majority (19) reported significant experiential learning, and saw a feedback mechanism between AS-L and information literacy (19 and 18 respectively, as shown by the categories, experiential learning and cognitive/reflective learning in Table 6-1). However, in her evaluation of the final research papers Simões did not find the expected levels of clear articulation between observations and theory.

Gray’s analysis of the research papers converges with Simões’

Table 6-5. Articulation of Connection between Literature and AS-L in Final Paper (n=24)

Well articulated	2
Moderately articulated	5
Weakly articulated	13
Not articulated	4

and further explores both the shortcomings and potentials in students' performance. She conducted a detailed analysis of the connections between AS-L and the literature asking whether students made connections between the service learning experience and the literature and asking how the literature and the service learning related to the thesis. These results are displayed in Table 6-5.

Clearly, these were the most difficult aspects of the research paper for students to effectively accomplish. Two of the students were able to make significant connections between what they observed in AS-L and the literature. Most of the papers weakly articulated the connection between AS-L and the literature, meaning that both service learning and the literature were mentioned, but connections were not really drawn between the two. Four of the papers failed to mention the service learning experience at all, despite the fact that this was a requirement of the assignment. Relying on only the analysis of the final papers, it appears as though most students were unable to make connections between AS-L and the literature. However, looking at other evidence, such as the reflection papers on both AS-L and IL, and the survey results, it appears that students made more connections than demonstrated by the research papers.

Because Gray only interacted with the class on three occasions, and did not develop a personal relationship with the students over that time, she lacked exposure to all the evidence of learning that was displayed in class on a day-to-day basis, and through the final presentations. Without experiencing what happened in the rest of the class, the indications of learning demonstrated in the papers are less than what was hoped for, particularly in regard to the integration of the literature with the AS-L experience. Simões' evaluation of the integration of the AS-L and IL components in the research paper did converge with Gray's. Simões' more frequent contact with students, and the oral

presentations of the research papers by students in her class allowed her to directly discuss with them their learning processes, and probe into what they learned in each component and in combining them. Although essentially converging with Gray's assessment, Simões believes she detected a potential for the success of this teaching strategy beyond what is empirically evident in what students were able to register in the written final paper.

Conclusions

It would seem that our natural theoretical point of departure in this study would have been the literature on the scholarship of teaching and learning. However, it was only after we collected the data and were struggling with the interpretation of our findings that we were led back to that literature. We searched for concepts that would combine our findings and place our original research problem in a broader conceptual framework.

At the data interpretation stage, reflections on the scholarship of teaching and learning literature became the cornerstone for a conceptual framework that would help us make sense of, and discuss the implications of, our findings. First, this framework addressed questions of how we as faculty acquire knowledge about our teaching and our students' learning. In agreement with much of the scholarship of teaching and learning, our study relies on our experience-based and research-based knowledge (Menges and Weimer 1996). A more challenging question, though, was conceiving of what kinds of knowledge on teaching and learning could be engendered by our research problem, and the investigation we sought to undertake. Kreber and Cranton conceptualize instructional, pedagogical, and curricular knowledge as three qualitatively different yet interrelated domains of knowledge about university teaching:

Instructional knowledge is concerned with the strategies we use in teaching; pedagogical knowledge is concerned with understanding student learning; curriculum knowledge is concerned with why we teach the way we teach. (2000, 481)

This distinction among these three domains of knowing about

teaching led us to organize the interpretation of our findings, and reflect on their implications for different subsets of questions related to our research problem. We present our concluding remarks below, organized by these three categories.

Pedagogical Knowledge

What did we learn about how students learn? First, we learned that AS-L can be a very effective teaching strategy in women's studies. It engendered several types of learning: experiential, affective, cognitive/reflexive, and civic, all of these fostering life-long learning. AS-L greatly impacted learning for students in their first year at the university as well as more mature students.

Second, in regard to information literacy, learning the research process is a complex, ill-structured problem that is cognitively challenging for undergraduate students. Making connections to what students already know and what is interesting to them helps to motivate significant learning in regard to making connections with other's ideas. Teaching broader concepts that students can apply to future research projects, such as research as a process and source assessment, along with providing students with opportunities to practice with these models in the context of the course, provides a foundation to build on as students grow and develop as learners.

Third, we learned that combining AS-L and information literacy has the potential to help students make the connections between what they observe in their AS-L experience and what they read in their literature review of the chosen topic. It helps them relate the personal and social experiences, developing their sociological imagination, and moving beyond conventional wisdom. We would claim that a well-designed and supervised AS-L experience will be more conducive to that learning outcome than less integrated activism.

Instructional Knowledge

We learned that an integrated course design is key to effectively combining AS-L and information literacy. Our course design for this pilot was developed according to Fink's integrated course design model. The pilot confirmed that any successful AS-L/IL combination will need to carefully consider and pay specific attention to the

situational factors, and how they constrain feedback and assessment. A successful integration of AS-L requires a supporting structure for collaboration with community and student supervision. Instructors' collaboration with the community organizations is crucial to ensure that the service provided relates to the course content and the research topic. Individual feedback to students from the course instructor is another crucial factor. This will require that course design take into account time availability for both instructors and students. We believe that a successful AS-L experience combines academic "service-learning" and "service-teaching."

In regard to information literacy, the full integration of all the steps in the research process, timing, and the sequencing of instruction are all keys to student development. Instructional methods in future courses will be enhanced through more clearly defined assignments, providing better models of what the result of assignments look like, better feedback from instructors, and stronger efforts to build relationships with students in the course around their research topics.

A more effective integration of AS-L and information literacy requires interdisciplinary collaboration in course design, even if one instructor teaches all the classes. It is crucial that the planning and scheduling of the AS-L and information literacy components allow for interplay of observations and theory. The below-expectation articulation of the two course components in the final research paper lead us to believe that we should (re)address this learning outcome in our course design, planning and scheduling the two components in a way to allow earlier feedback from the instructors on how students were combining observations and literature—we could, for instance, have the research paper turned in and graded in a two-step process, with a draft version preceding the final version. Moreover, students should be graded on what they learn in both components, and how they integrate them. In summary, the course design needs to be even more learning-centered – as opposed to the "list of topics to be covered" approach.

The value of our findings point out how the teaching strategies we designed must be reinforced, revised, and modified to further foster the outcomes we envisaged. In summary, we made a short move in the right direction. Following Bernstein (2007) we see this research as part of a circular process of discovery, with problems leading to propositions of solutions, data gathering, and reflection on findings, which

then restart the process with new problems to be tackled.

Curricular Knowledge

We would like to claim that combining AS-L and information literacy had implications for curriculum development in women's and gender studies as well as for the new General Education Curriculum implemented in the fall 2007. We believe that the integration we proposed added an important experiential dimension in learning about diversity in American society. We believe our study contributes to the kind of knowledge on teaching and learning needed to address the many challenges in a successful implementation of the ideas and principles in EMU's General Education Curriculum. Consistent with the new general education curriculum, the integration of AS-L and information literacy is a teaching strategy aimed at working with students to become:

- a) responsible members of society, acquiring knowledge tied both to personal and communal needs; understanding that gender, race and other differences matter, and how; learning to think in different ways, becoming empathetic; and
- b) active, flexible, life-long learners, active participants in their own education, learning how to access knowledge, acquiring a love of learning.

However, developing information literacy skills and learning how to make empirical observations connected with literature research is not something that can be addressed in a single course. We can begin to help students understand some of the basics about source evaluation, engaging in research as a learning process, accessing library resources, understanding the world of scholarly publication, and making empirical observations that interplay with literature research. We can also help them think about the interdisciplinary nature of women's studies, and what that means in terms of their approach to research.

But what we can do in this context is really minor in terms of the need that we found. Until higher education actually makes the shift from curricula that focus on acquiring information, rather than developing the skills needed to create new knowledge from that information, we cannot hope to scratch the surface of developing informa-

tion literacy, writing skills, and empirical research in a single course. The entire curriculum must shift to a focus on significant learning: how will students learn how to learn, and communicate what they have learned at our institutions. This means that all faculty will need to shift to teaching information literacy and writing skills, using course content as a focus, rather than maintaining a content coverage-centered approach at the expense of students' learning as envisaged in the principles in the new General Education Curriculum.

We believe that combining AS-L and information literacy carries considerable potential as one of the several new teaching strategies needed to implement EMU's General Education Curriculum's overall goal to teach students to think critically and communicate effectively, promoting intellectual curiosity and a love of learning, or, to sum it up, to inspire significant learning.

Finally, we would like to claim that the combined effect of the pedagogical, instructional and curricular knowledge acquired in this study will result in the continuous development of an interdisciplinary teaching strategy for WGST 200 with the potential to allow students to move beyond conventional wisdom and develop a more scholarly approach to and appreciation of women's studies.

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Appendix

Information Literacy Reflection Questions

1. Describe your research process for the paper/project this term. What steps did you take and when did you take them? What were some of the most important events in your research process?

2. What, if anything, did you do differently for this research project than for those that you have completed in past? Was this successful?

3. Is there something that you learned from your research process this time that you will try to do again the next time you have a research assignment? If so, please describe what it is.

4. What was the most important or useful source that you found in your research? How did you find it? Why was it important or useful?