ADVANCING THE PROMOTION OF INFORMATION LITERACY THROUGH PEER-LED LEARNING

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ABSTRACT
Two new courses at the University of Windsor are opening a door to thinking about information literacy and curricular integration in very different ways. The courses, Ways of Knowing and Mentorship & Learning, were originally designed to help with retention and transition issues. They were also founded on the concept of peer-led learning at the university level. In this model students are able to organically connect with their peers in a way that is not always possible with faculty and librarians. It did not take long to see the potential in using peer mentors as conduits in the transfer of information literacy skills. This article tells the story behind the development of two information literacy courses and the mistakes that had to be made before the connection between mentors and information literacy could be seen. It also shows that by involving faculty and students in the design and delivery of an information literacy-integrated curriculum the library can accomplish far more than any one-shot, tool-based session.

INTRODUCTION
The goal of most campus information literacy programs is to integrate information literacy components into the curriculum through librarian-instructor collaboration (Black, Crest, & Volland, 2001; Grafstein, 2002; Lindstrom & Shonrock, 2006; Rader, 1991). While one-shot research sessions taught by librarians are definitely helpful in many contexts, for deeper, sustainable learning students must have the opportunity to have these skills reinforced throughout a semester (Bransford, Brown, & Cocking, 2000; Hollister & Coe, 2003). Despite many indications that faculty–librarian collaborations are important to student research
success (Grafstein, 2002; Iannuzzi, 1998; Rader, 2004), both workload issues for librarians and the time available in the classroom are among many barriers that sometimes make this difficult (Becker, 1993; McGuinness, 2006). Two innovative courses at the University of Windsor, a first-year course called Ways of Knowing (WOK) and a senior-level course called Mentorship & Learning (ML), are the testing ground for a new way of thinking about information literacy integration.

**COURSE DESIGN AND GOALS**

With the dual intention of improving student learning and tackling transition and retention issues, a team was established in 2004 by the Dean of the Faculty of Arts and Social Sciences (FASS) at the University of Windsor. The First Year Design Team (FYDT) was initially made up of five faculty members from across FASS. The team’s mandate was to design a course that would help first-year students make the transition to university while also providing them with a support system. The team designed and currently delivers WOK and ML based on principles and practices of active learning and peer-led learning, the power of which has been proven in a variety of different cases (Havnes, 2008; Kreie, Headrick, & Steiner, 2007; Lewis & Lewis, 2005; Tien, Roth, & Kampmeier, 2002; Smith, 2008). The primary purpose of these two courses is to help students develop the skills and abilities needed for academic success and to help them regard learning as a lifelong endeavor. The secondary goal is to help students understand how the university functions and what their roles and responsibilities are, so that they may effectively navigate through their university careers. WOK is an elective, interdisciplinary course offered every fall semester to up to 200 first-year FASS students. The course was intentionally designed to help first-year students understand how various disciplines across FASS conceptualize the future. Professors from various disciplines across the institution are invited to speak to and engage with students in a dialogue pertaining to their subject matter. Lecture topics include “The Future of Language,” “Utopia and Dystopia in Science Fiction,” “Lying with Statistics,” and “The Future of Food.” This introduction to various subject areas helps students understand how concepts in a variety of disciplines are formulated. Another major component of the course involves students breaking into small groups of 8 to 10 that are facilitated by a mentor. Mentors are students who are educated and trained in ML, a full-year, upper-level course specifically designed to prepare seniors to be peer learning facilitators for first-year students in the WOK class. Many of the students in this class have taken the WOK class and are familiar with the course content and design. Student mentors learn how to facilitate learning in small groups as they design and lead breakout sessions that focus on the content presented in the lecture. They also provide support for first-year students in achieving a more seamless transition to university.

With the design of these two new courses, FYDT knew that there was a tremendous opportunity to see a shift in how incoming FASS students connected with the university. However, in the summer of 2005 FYDT added an information literacy librarian to the team, and this gave all members some welcome insight on issues that had, early on, not been considered. While universities struggle to deal with transition and retention issues, they also continue to cope with serious concerns regarding the information literacy skills of students entering and graduating from their institutions. Can it be argued that there is a correlation? Would students who feel more confident in their ability to think critically about information and research effectively be more likely to complete their university degree? This is the question asked by many librarians and, in some cases, faculty (Moore, Brewster, Dorrah, & Moreau, 2002; Regalado, 2003). Few people would debate the need for students to gain information literacy skills during their university education. While many students are competent at accessing information they tend to lack the skills necessary to select and evaluate the most appropriate sources. This leads to many poorly cited papers, which invariably cause faculty to be frustrated with their students’
level of research skills. However, the two pivotal questions often raised about this issue are how and who: How can we make sure that students graduate with these skills, and who will be most responsible for making sure that it happens? While librarians are certainly well positioned to be experts on the world of information, they often lack connections to the course or departmental curriculum. That connection to curriculum is vital for students and their learning. If there is to be true success in the students’ acquisition of information literacy skills, then there must also be true integration of information literacy into the curriculum. This is also where lessons learned regarding transition and retention—such as student engagement, connection to the university, and academic success (Kuo, Hagie, & Miller, 2004)—should be heeded. Research indicates that students are more likely to succeed in university if they are given the opportunity to connect with and commit to the institution, interact with faculty and peers, and actively engage in their learning process (Sidle & McReynolds, 1999). This is most effectively achieved through peer-led learning initiatives (Krie, Headrick, & Steiner, 2007; Lewis & Lewis, 2005; Tien, Roth, & Kampmeier, 2001).

The University of Windsor made determined attempts to promote the value and importance of information literacy for several years. Besides the establishment of a strong, library-led information literacy program and the existence of many supportive faculty members, the concept is also promoted at higher levels. The university’s strategic plan, *To Greater Heights: An enhanced culture of learning. Strategic planning for 2004-2009*, mentions information literacy as one of the core attributes of a Windsor graduate (University of Windsor, 2003). This recognition by the university’s administration of information literacy as a central part of a university student’s education is important. It provides those interested in promoting information literacy skills with a basis for arguing the need for these skills to be integrated into the curriculum. It also gives the library the same level of ownership and responsibility as departments and faculties.

WOK was developed with the understanding of the FYDT that it would have a research component, and that the library would be involved in some way. A librarian was invited to a team meeting to discuss possibilities and eventually became a permanent member of FYDT. A group project had already been designed and was a cornerstone of the course. The project (see Appendix I) had a strong problem-based learning component and was seen as the most obvious way for students to be introduced to information literacy skills. The task required that students, in their breakout groups, select a site in the City of Windsor and project what that site might look like in 20 years. Each group would then display their projections, via a multitude of mediums, in the student centre at the end of the semester. It was a bold, ambitious project, and one that gave the students a lot of room for creativity. Each group was assigned a librarian to work with them and help them find information resources. In many ways, this became a slightly frustrating experience for the librarians, because often students did not need to consult the university library’s resources in order to be successful in their research task. Resources such as City Hall, local historians, the public library and archives, and owners or employees affiliated with the site proved more valuable. This, however, provided librarians and FYDT with a larger lesson: Students do not need to make use of the university library to gain information literacy skills. Determining the types of information resources required for this project was far more difficult than most average first-year assignments and forced students to think outside the box. One group that was investigating the Windsor Jail could not get access to the facility, but did get an impromptu interview with an inmate who provided some information about the interior. Another group was able to convince the city’s mayor to sit down for an interview. The students were all informed that the information they gathered, especially from potentially biased sources (jail inmate), had to be substantiated with other sources. Slowly, students started to build their cases and learn about the importance of finding appropriate information, evaluating it, and using it in a way...
that made their projections stronger. This project has been assigned to first-year students in WOK for the past four years, but not without constant evaluation and improvement. Each year FYDT collects feedback regarding all aspects of both the WOK and ML courses from students and mentors. From the very beginning, the group project had two major flaws, both of which were strongly related to information literacy.

The first flaw was related to the actual design of the project. When the group project was assigned during the initial offering of WOK in 2005 it seemed like a perfect task. Students would be given the flexibility to make the project their own with just a handful of key requirements: a) they had to select a site in the City of Windsor, b) they had to project what this site would look like in 20 years, and c) they had to display their projection to the campus community at the end of the semester. It was a project that required students to connect with the community, think critically and creatively about a given problem, learn a variety of research skills, and work with a group of their peers under the guidance of a senior student mentor. The problem began to take shape soon after the project was assigned. Students were told that in order to project a site into the future they would have to understand both its past and its present. However, many were reluctant or simply lacked the skills necessary to track down the information required for a strong projection. The idea of projecting into the future also proved to be far too enticing, and most groups began brainstorming what their site might become before they even began to research. This led students to employ the novice research technique of knowing what they wanted to prove and trying to find information to make the case. Librarians who were assigned to the groups were often at a loss as to how to convince these students that their research strategy was flawed. The actual flaw, however, lay mostly in the design of the assignment. Students were not given enough firm details to complete the type of project work that FYDT had envisioned. They were also given far too much flexibility, especially considering that these were first-year students with very little research background. It was inevitable that they would jump to the exciting element of the future before embarking on the work required to make a reasonable projection. Determined to fix the problem, FYDT knew that the unique, flexible project they hoped would produce fantastic results had to be revised.

As soon as the students knew they were to project into the future, they stopped focusing on researching the past and present. Thus, the key to changing the way students approached the project, and how they approached their research, was to give them just the amount of information required for each section of the project. The project was redesigned to be completed in two parts. Part 1 now requires that students select a site in Windsor and research its past and present. Students are provided with a list of questions to consider, and they submit a research packet containing all the information they gather about the site, along with an annotated bibliography. When Part 1 is assigned, students are told that there is a second part to the project, but they are not aware that it involves a projection. The delayed disclosure keeps them focused on the task at hand, while the submission of the research packet and annotated bibliography reinforces the importance of the research component.

Part 2 of the project asks that students take the information they gathered in Part 1 and use it to project a future for their site. Having the research packet completed and available for review makes it much easier for students to rely on research to make their projection. The project becomes less about predicting the future and more about learning how to work as a group and find information to prove their projection. In some cases, students were disappointed with the less than exciting future they had to predict, but still made the projection because it was the future that all the information pointed toward.

While the first research-related flaw in the course design was important to fix, making changes to correct the second flaw was vital. The student mentors, who act as peer learning facilitators in small breakout groups with first-
year students in WOK, are educated and trained in the ML course. It was not until the WOK course had run a couple of times that FYDT realized the immense impact that these student mentors had on multiple aspects of the first-year experience. What FYDT did not anticipate was the necessity for mentors to have confidence in their own research skills in order to support the first-year student in their completion of the group project.

The ML course was designed specifically to work within the contexts of WOK. The mentors are thoroughly integrated into the three-hour-a-week WOK class: They are expected to keep up with assigned readings, model effective student behavior by raising questions during the lecture component of class, and encourage first-year students to actively participate. Following the guest lecture and class discussion, mentors lead their assigned breakout group of 8–10 students through a 45-minute session in which they engage in an active-learning activity to further explore the content of the lecture and make connections with the related weekly assigned readings. The mentors do not instruct or assess students; rather, they support learning by helping students develop the confidence and skills to formulate and communicate their thoughts and ideas. Another key area of responsibility for the mentors is to help guide the first-year students through the completion of the group project. Originally, their role with the project was to offer support and to assure that all members of the breakout group were working toward the final goal of the project. FYDT soon learned that the mentor’s role with the project was far more complex than anticipated. WOK students were looking to mentors for support and guidance specifically relating to research and information retrieval. Even though librarians were dispatched to all the breakout groups three times throughout the semester to help with project research, the mentors were still preferred by first-year students for research guidance. While some might make the argument that librarians should have been promoted more as the central source of help, this is easier said than done. Studies have shown that many students shy away from admitting that they need help, especially those who lack faith in their academic abilities (Karabenick, 2003; Ryan, Gheen, & Midgley, 1998; Webb & Mastergeorge, 2003). Mentors were specifically added to the WOK course to help facilitate learning among the first-year students. Given the that these students continued to seek research help from their mentor, it was the consensus of FYDT that mentors should, under the guidance of the FYDT librarian, continue to act as a conduit for information literacy skills.

The main obstacle to this newly identified role was that as third- or fourth-year students, most of the mentors did not have confidence in their research skills, and either shied away from giving advice or, perhaps worse, gave uneducated guesses. FYDT never considered that mentors would 1) be given a research support role by their mentees, and 2) not have the appropriate research skills. This made it necessary to revise the ML course to include more direct and focused attention to information literacy so that mentors would have the necessary skills, knowledge, and experience to effectively assist first-year students with the group project. It would have the added benefit of improving the mentors’ information literacy skills and, in turn, raising their ability to research for their own courses.

“It is interesting to see how much we feel we understand about research and yet learn that it is only a small component of the vastness of resources that exist.”

- 2nd year student mentor (2008)

Preparation for the role of peer mentor begins one semester before the WOK course. The curriculum focuses on developing team- and community-building skills, learning how to facilitate learning in small groups, designing active learning strategies, practicing effective questioning techniques, and developing critical thinking and reading skills. Units of instruction include critical thinking and reading, the role of the mentor, feedback, and now, information literacy. Another layer of the ML course is the integration of senior mentors: senior students,
hired as teaching assistants, who have already completed the mentor preparation program and have mentored first-year students in the WOK class. The senior mentors are integral to the curriculum and instruction of the ML class, and play a very important role in the preparation and training of new mentors. They exemplify Vygotsky’s concept of assisted learning as they guide their peers in learning new skills and techniques and continue by supporting their applications (Cracolice, & Trautmann, 2000). The senior mentors design and facilitate a breakout session with the “mentors-in-training.” During this time, the instructors play a secondary role while the senior mentors design and facilitate a hands-on session that actively engages mentors in further exploring or practicing some aspect of the instruction presented early in that class.

“As mentors we need to understand the various forms of literacy and find ways to incorporate that awareness to our mentees at all times. I have definitely gained a lot through understanding these forms and have become more cautious when citing materials or using resources as references. This has increased my ability to critically evaluate all situations and has helped me develop a stronger sense of self. It must be noted that this growth has been a transition for me.”

-Second-year student mentor (2008)

Much of the mentorship and learning program is constructed on modeling, an important technique in information literacy. Modeling occurs at many levels throughout both the ML and WOK courses. Mentors model good student behavior, effective learning strategies, and positive attitudes for their first-year students. Clearly, though, the example of modeling begins in the training and preparation of mentors in the ML course, where course instructors model mentor behavior and attributes through curriculum design, instruction, and feedback. Mentors-in-training are purposely guided toward recognizing how and when this occurs. It is intentionally made transparent through the curriculum in order to help student mentors understand why they are doing what they are doing and to recognize its value through their own learning and development. Because modeling is so integral to the mentor role, it soon became obvious how important it was for mentors to have appropriate research skills, and how powerful it could be for senior students to model good research behavior. The information literacy unit introduces mentors-in-training to the concepts required to research effectively. The unit does not include any tool-based instruction; instead, it helps students learn to think critically about information they find and use, distinguish between different types of information, learn how different information is produced, and determine how best to evaluate the information they find. Through readings, in-class activities, critical analyses, and completion of group projects similar to the one assigned in WOK, mentors get a foundation in information literacy, something they can then model when they take on the mentor role.

“After our breakout session where we chose the Peabody Building [as our project site] all the members of the group said they would find all the information they could on the building and bring it to a group meeting. As it turned out we all did the exact same thing and searched “Peabody Building Windsor” in the Google search engine. The result was that almost every member of the group showed up with the exact same article. [Only one member] took the time to go to the library and she was the only one who discovered that the building we should have been researching is actually called the Walker Power Building. This goes to show that Google is not producing superb information analysis.”

-Second-year student mentor (2008)

The senior mentors add another layer to the integration of information literacy. Like the relationship mentors have with their first-year student mentees, the senior mentors work and speak from a place of experience, and they are
very credible to the mentors-in-training. The breakout sessions that the senior mentors run with mentors-in-training are also deliberately planned to model effective planning and facilitation, as well as positive and professional mentor behavior. It is also an opportunity for mentors to observe various facilitation styles by interacting with several of the senior mentors over one semester. Feedback from mentors indicates that this is the most helpful part of the course. As a voice of authority, senior mentors are able to reach mentors-in-training in ways that instructors cannot. They are respected in the classroom, but also considered social equals, which intrinsically motivates and drives the mentors to develop like qualities (Wlodkowski, 1999). The fact that they are close in age, share similar personal experiences, and have had success with the mentor role provides the mentors-in-training with security and confidence as they develop their own mentor identity. Because of the role senior mentors play in the training of new mentors, it is imperative that they too feel comfortable with their ability to research; just as mentors in WOK, the senior mentors must assist their mentors-in-training with completing the group project. As we continue to integrate information literacy into the mentorship and learning course curriculum, instructors must routinely monitor the information literacy skills of senior mentors.

**IMPACT ON STUDENT LEARNING**

Since WOK and ML were first offered, FYDT has been gathering data in various areas to help ensure that WOK is delivering its intended effect. The data gathered made it clear that while WOK was successful as a course, the mentors were key to its success. The data certainly indicates that mentors aided the transition of first-year students through the group breakout sessions. Via an in-class survey, WOK students were asked to provide feedback of their experience. When asked to rate the atmosphere in the class, nearly 80% of first-year students (78.8%) indicated it was energizing. Very few (5.3%) found it stressful or overwhelming. More evidence of the course’s impact surfaced when students were asked to rate the extent to which it helped them transition to university, with 67.1% indicating agreement. Furthermore, 67.1% also indicated that working in breakout groups enhanced their overall academic experience. Finally, the majority of first-year students (84.2%) agreed that they felt comfortable making contributions in the breakout sessions, whereas only 38.9% indicated they felt comfortable making a contribution in class.

On a separate occasion FYDT asked first-year students to provide feedback on their mentors. Students were asked several questions about the assistance provided by mentors on a 1 (never) to 4 (always) scale. The results again support the contribution mentors make with helping students transition to university. The highest rated questions had to do with the extent to which the mentors were supportive of group contributions during the breakout groups (M=3.881); available on an online discussion board (M=3.876); and supportive of individual contributions during the breakout groups (M=3.847).

FYDT has also been following WOK’s impact on student retention, which was an important goal during the design phase of both WOK and ML. The team tracked the first two groups to complete WOK in the fall of 2005 and fall of 2006. In January 2006 data was gathered to see how many of the first WOK students (n=180) returned to the university versus students who did not take WOK (n=1965). Results revealed that while 97.8% of WOK students returned, only 88.1% of non-WOK students returned. These groups were tracked for three semesters. By the 2007 winter session, 84.1% of the first group of WOK students were still enrolled at the university, while 69% of non-WOK students remained. A chi-square independence test indicates a significant difference in these rates ($\chi^2 =17.473; p<.05$). Similarly, one stage of data gathering reveals that of the students who took the fall 2006 WOK course (n=217), 93.1% were still enrolled the following semester, while only 87.2% of non-WOK students (n=2027) were still enrolled. A chi-square independence test indicates a significant difference in these rates.
The survey results, data collection, and anecdotal evidence show FYDT that there is certainly something positive coming out of this peer-learning model. As soon as the team realized the impact mentors have on the learning experience there was a push to enhance their training. Enhancements focused on issues such as refining their research skills and honing their knowledge and application of information literacy. The information literacy unit has now been a part of ML for one year, and the team is still gathering data on its impact. However, anecdotal evidence has certainly led us to see real changes, not only in the level of research displayed by the mentors, but also in the research skills shown by first-year WOK student group projects.

CONCLUSION

When FYDT first envisioned WOK, there was a strong sense that the course needed to include more than just faculty-student interaction. In order to truly connect with students, a peer-led learning approach seemed the best fit. It was with that in mind that the ML course came to be. Indeed, the Faculty of Arts and Social Sciences at the University of Windsor is so enthusiastic about the role these senior students play in the first-year experience that plans are already underway to expand the mentorship program and perhaps soon have mentors integrated into all first-year foundational courses in FASS. From an information literacy standpoint, this provides a tremendous opportunity. FYDT will continue to track the effects of empowering mentors with a foundation of information literacy. If mentors can be given the chance to improve their research skills and then transfer those skills on to first-year students in all foundational courses, the university could be on its way to solving those “who” and “how” questions. Of course, mentors cannot be solely responsible for the task of information literacy integration. Librarians and faculty must continue to collaborate to design effective assignments and departments must also continue to build information literacy skills are gained through the first-year experience.

REFERENCES


APPENDIX

This is the revised group project that students in both WOK and ML currently complete as part of their assessment.

01-01-110/ 02-02-110
Ways of Knowing Group Project
Part 1: Research Packet
Due Oct. 10th

The group project will be assigned in two parts. It will be worth 25% of your final mark.

Part 1: 10%
Part 2: 10%
Peer Evaluation: 5%

In Part 1 you will select a site in Windsor and you will answer research questions related to that site. Answers to those research questions will be included in a Research Packet, which you will hand in as a group on Oct. 10th.

Your Research Packet will include:
1. **Research on the current state of your site.** Questions you **may** want to ask include, but are not limited to:
   a. What is the site being used for?
   b. Are there any plans to change the current use of the site?
   c. Who owns the site?
   d. What part of Windsor’s population is served by this site?
   e. Are there any positive/negative associations with this site?
   f. What role does the site currently play in the community?
2. **Research on the history of your site.** Questions you **may** want to ask include, but are not limited to:
   a. When was this site created/built?
   b. Who has owned the site over time?
   c. What other purpose has the site had, if any?
   d. What changes has the site gone through over the years?
   e. Did the site have a more positive/negative association in the past?
   f. What role did the site once play in the community?
3. **Documentation of your research process.**
   a. What sources (books, newspaper articles, journal articles, websites, interviews, etc.) did you use to find your information?
   b. How did you evaluate your sources (i.e., how did you choose which sources were most relevant/useful/valid)?
   c. What struggles did you encounter while researching your site?
4. **An annotated bibliography:** List all the sources you consult and give a brief summary of how this source was useful. Please use APA format.
**Part 2 of the project is comprised of Projection and a formal Presentation.** Using the site you selected and researched in Part 1, you must now, in Part 2, project what that site will look like in **20 years**. You will make your projection, along with your arguments for why, in the form of a presentation, which your group will present in class on **December 5th**. This part is worth 10% of your term grade.

**Projection:** In order to project your site effectively you must refer to the information you retrieved on both the history and the current state of your site.

Please remember:

- Your projection must be based on research – *refer to the information you gathered in Part 1 and any subsequent research. Any future is possible* but we are looking for projections that are **probable**.
- Your projection must be based in reality – *you can only project a future that you can prove with current evidence. Do not make up any facts or take on any fictitious roles.*
- Your research may indicate potential change or it may indicate no potential change, but you must make a case either way.

**Presentation:** Your group will make a formal presentation in class on December 5th, indicating what future you are projecting for your site. The presentation should highlight the projection and **must** indicate the reasons why your group feels, based on your research, that this projection is likely or probable.

- **Presentation Format:**
  - You will have a *maximum* of 15 minutes to present your site and your projection, followed by 5 minutes of questions.
  - Every member of the group should be involved.
  - Any type of additional support for your projection (i.e. poster board, pictures, brochures, A/V) may be used. However, make sure that this material helps to support your presentation and does not create unnecessary clutter.

*Note:* If you consult additional sources during Part 2, i.e. sources not documented in your annotated bibliography from Part 1, please add those to your annotated bibliography and have that and the rest of your research packet available during the Presentation.