Piloting a Blended Model for Sustainable IL Programming

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Introduction
MacEwan University is an urban undergraduate university in Edmonton, Alberta, offering a wide variety of diplomas and baccalaureate degrees to over 12,000 students across three campuses. One of its key mandates is teaching information literacy and critical thinking skills to students, particularly within first-year English courses. Approximately 160 English library instruction sessions occur each year, which, prior to 2014, could not be single-handedly taught by our English Librarian alone. Rather, the Library relied on a complement of sessional librarians to share this teaching load. In addition to receiving face-to-face instruction from the Library, students in first-year, core English courses also complete for credit a mandatory online IL tutorial through their course LMS.

In 2013, the Library instruction team was asked by library administration to create a more sustainable model for English IL programming, one that the English subject librarian could manage without the support of sessional librarians. Because an online IL tutorial was already mandatory for first-year English students, one suggestion was that the online tutorial simply replace the face-to-face instruction sessions students were currently receiving. However, the instruction team was resistant to the idea of moving to a wholly online model for our English instruction program. Doing so risked weakening the strong personal ties that the English Librarian had cultivated with English faculty and with students. Additionally, the Library had only recently developed a successful active learning approach to face-to-face instruction in first-year English, and so was hesitant to discontinue this learning experience altogether. Accordingly, a new model for our English Library Instruction Program was in order, and we set out to investigate the alternatives.

Literature review
For academic libraries with limited resources, shifting components of information literacy instruction online in the form of asynchronous tutorials is an effective means of reducing heavy library instruction loads (Nichols *et al.*, 2003; Mardis and Ury, 2008; Usova, 2011) without sacrificing student learning (Silver and Nickel, 2005; Nichols *et al.*, 2003; Anderson and May, 2010). Tutorials are particularly effective in developing task-oriented skills in students, such as database searching, along with mid-level thinking skills, such as the application of concepts (Reece, 2007). Librarians are also increasing their efforts to cultivate student proficiencies in higher-order processes, such as information navigation, analysis, and evaluation (Reece, 2007; Zabel *et al.*, 2011; Anderson and May, 2010). In turn, these higher-level, critical thinking skills may require more than just ushering a student through an online tutorial. Still, Reece (2007) suggested that higher-order thinking *can* be taught through thoughtfully designed online tutorials, but that additional opportunities for scaffolded learning are required as well.

Notably, a blended approach—which pairs online and face-to-face instruction—offers precisely these kinds of opportunities for effectively scaffolding learning (Lapidus *et al.*, 2012; Usova, 2011; Kraemer *et al.*, 2007; Anderson and May, 2010). In the face-to-face components of a blended program, hands-on learning and vocalized reasoning in groups can reinforce and expand upon the learning taking place through online tutorials (Lapidus *et al.*, 2012). Further advantages include multiple information literacy learning opportunities for students (Usova, 2011), greater levels of student engagement (Usova, 2011; Lapidus *et al.*, 2012), and perhaps most importantly, a stronger rapport between students and librarians than when students are strictly engaging with librarians online (Kraemer *et al.*, 2007).

Kraemer, Lombardo and Lepkowski (2007) found that the element of personal contact time with a librarian instructor had an observable, positive impact on student learning (339). Likewise, this personal relationship is also valuable to faculty instructors (Nichols *et al.*, 2003). In discussing their implementation of an online information literacy tutorial for English courses, Nichols, Shaffer and Shockey (2003) described English faculty raising concerns about a "loss of contact with librarians" (385). To alleviate these concerns, Nichols, Shaffer and Shockey (2003) detailed how the online tutorials were given a personal touch: Librarians started the process off by meeting with students in person and providing a brief introduction to the online IL content to students, all the while reinforcing the value of the library and librarian role to faculty (385).

Whereas library instruction delivered wholly online undermines the development of rapport between students and their instructional librarians, blended models can foster rapport rivaling or even exceeding that emerging from traditional one-shot, face-to-face instruction sessions. In assessing a blended library instruction model for pharmacy students, Lapidus, McCord, McCloskey, and Kostka-Rokosz (2012) noted that when instruction partially occurs through asynchronous online tutorials, *more* time can be spent with students on meaningful active learning activities (392). Additionally, Garrison and Kanuka (2004) emphasized the role of the instructor in creating a "community of inquiry" in the blended environment, wherein an early face-to-face meeting with students builds community and promotes learner engagement (97). By combining easy in-person access to librarians and inquiry-based activities to reinforce and build on concepts learned online, a blended model can foster the reasoning necessary for the development of higher-order critical thinking skills (Reece, 2007; Lapidus *et al.*, 2012; Garrison and Kanuka, 2004).

Timing, however, is critical. In the face-to-face environment, the strategic timing of a series of short, point-of-need instruction sessions tied to course curriculum has been shown to have a very positive impact on student work (Van Epps and Nelson, 2013; Ghandi, 2005). Stowe (2011), in turn, describes the positive impact of multiple face-to-face sessions across a sequence of required courses as a means of scaffolding key IL concepts mandated in the English curriculum, and points to the value of first ensuring a minimal level of research proficiency is gained prior to introducing students to critical source evaluation skills. Similar considerations must be made in a blended environment to ensure that learning outcomes are mapped to course curriculum, learning experiences

are scaffolded, and learning opportunities coincide with student point-of-need (Anderson and May, 2010). Indeed, Anderson and May (2010) argued that the method of library instruction matters far less than deliberate, thoughtful inclusion of information literacy instruction into course curriculum through faculty consultations and collaborations (496; 499). Moreover, involving instructional faculty in the development of information literacy instruction programs also mean that they will be likelier to support and promote information literacy learning opportunities to their students (Anderson and May, 2010; Nichols *et al.*, 2003).

Background and rationale
English Library Instruction Program
A first-year English course is required for virtually all degree and diploma students enrolled at MacEwan University. Learning outcomes for the required first-year English courses include research and information synthesis skills, which are supported by face-to-face classroom sessions taught by librarians and *SearchPath*, the Library's online information literacy tutorial. The face-to-face sessions are strongly recommended by the department of English. Since Fall 2012, virtually all have included hands-on instruction on the evaluation of articles to positive results, based on informal assessment and anecdotal reporting (Shamchuk and Plouffe, 2013). *SearchPath*, in turn, is a graded, required component of core first-year English courses.

English Library Instruction Program Assessment
During the 2012-2013 academic year, Macewan University librarians conducted a rigorous formal assessment of the English Library Instruction Program in order to evaluate student performance on key learning outcomes (Shamchuk *et al.,* 2013). The worksheets used as the assessment instrument walked students through the research process using the students' actual assignments and research topics. By having the students answer questions about their own research topic during the library instruction session, the data collection instrument represented a learning opportunity that fulfilled a real-life need of the student: finding quality information for their assignment.

Librarians evaluated 232 student worksheets on two key learning outcomes mapped to ACRL (2000) *Information literacy competency standards for higher education*:
> *1. Construct an effective search strategy in order to locate relevant*
> *resources articles (maps to competency standard 2.2).*
> *2. Evaluate sources in order to determine which are most appropriate for*
> *the assignment (maps to competency standard 3.2).*

For outcome one, students achieved an average score of 1.7 out of 2.0, and 195 of 232, or 84% of students achieved an average score of 1.5 or higher on learning outcome 1, which met the team's measure for success for this outcome (Shamchuk *et al.,* 2013*)*. The average score for outcome two overall was 1.4 and 107 of 232, or 46% of students achieved an average score of 1.5 or higher on outcome two, which did not meet the team's measure of success for this outcome. The results of this large scale assessment of our IL English program demonstrated that while students had little problem in locating information, they struggled in assessing whether it was appropriate for their needs.

New Learning Commons at MacEwan University Library
In Spring 2013, MacEwan University's first Learning Commons Librarian was hired. The vision of the Learning Commons was to foster student self-directed learning with an array of course-specific and general workshops in the Library's computer classroom. As Learning Commons programming developed, the Library instruction team realized that entry level drop-in research workshops, specifically those aimed at sharpening student skills around topic development and searching with the Library's discovery tool, had the potential to supplement or even replace aspects of the face-to-face IL library sessions being taught in first-year English.

Goal for the Development of our Blended Model
After much consideration, we determined that the development of a new model would necessarily involve the following:
  • Collaboration with the English department and Faculty, continuing the strong personal presence of the English subject librarian in the first-year instruction program.
  • Recognition that many basic search process skills could be successfully taught by the mandatory online library tutorial.
  • Inclusion of a hands-on source evaluation activity for students to develop critical thinking and analysis skills.
  • Adoption of the Learning Commons philosophy of promoting and facilitating student-directed learning opportunities.
Our goal was to develop a sustainable, blended information literacy instruction model for English that could be managed by our instruction team, reduce duplication of content and effort, incorporate online and in-person instruction, and promote self-directed learning opportunities through our new Learning Commons.

Description of the new blended model
After reviewing the literature, comparing different models of blended instruction at other academic libraries, and reflecting on the strengths of our IL instruction program for first-year English, the MacEwan University Library instruction team unveiled our new hybrid model for the English Library Instruction Program: *The 4 points of contact blended model*. Within the new blended model, students enrolled in first-year English classes are given four opportunities to meet, hear from, watch, or learn along with the English Librarian or other MacEwan instructional librarians. The four contact points between English students and the Library are timed strategically throughout the semester, matching course content, assignment deadlines, and student point-of-need as closely as possible. By spacing learning across the semester, opportunities for scaffolding of learning are hopefully being created.

First Point of Contact
MacEwan students in traditional face-to-face library sessions might not meet a Librarian or even enter the Library until late in the term when research was needed for their final English essay. Conversely, one of the requirements of our new model was that we meet students earlier in the semester with a ten-minute classroom visit, alerting them to the many ways in which the Library can support them throughout the term. In this visit,

which takes place during the first month of classes, the English Librarian shares a brief handout, which includes the following: the librarian's contact information and office hours, an overview of Library services (e.g., library guides and reference services), instructions on accessing the online IL tutorial along with its due date and grading, as well as pointers for learning about upcoming drop-in research workshops through the Library's Learning Commons. Altogether, this quick visit gives students and teaching faculty easy, early access to their Librarian for initial questions, and sets the stage for comfortable interactions with the Librarian across the semester.

Second Point of Contact
At the core of our information literacy instruction program is the online IL tutorial completed by first-year students for credit in their English courses. This modularized, interactive tutorial—accessed by students through the institution's learning management system—was built using Adobe Captivate, and roughly modeled on the old Western Michigan State University's Open Publication Licensed tutorial, *SearchPath* (http://www.metrostate.edu/msweb/resources/library/research_tools/tutorial/docs/opl/license.html). It is composed of five modules, each with 2-5 interactive learning objects, covering the basics of thinking about a topic, forming search strategies, and finding resources using various library tools. The fifth module, created in close collaboration with MacEwan University's Writing and Learning Services faculty and the Academic Integrity Coordinator over the Summer of 2013, covers principles of citation, academic integrity, and plagiarism. Each of the short, interactive learning objects is linked to a specific learning outcome tied to the ACRL (2000) *Information literacy competency standards for higher education*. In the new 4 points model, this online tutorial replaces much of the instruction formerly taking place in face-to-face classes.

In anticipation of the Fall 2013 pilot of our blended model, the Library instruction team spent a considerable amount of time over the Summer of 2013 editing and updating the content of the online tutorial. The decision was made to remove general library introductory information, which would be covered in the 1st point of contact, the 10-minute class visit, and to remove content on evaluating information sources, which would be taught in the 3rd point of contact through a hands-on, face-to-face learning activity. Once revised, the tutorial was reduced in length from 150 to 70 minutes, and the number of graded assessment questions reduced from just under 50 questions to 10 questions.

Because one of the goals of our 4 points model was to maintain and cultivate relationships between students and the library, or more specifically with the English Librarian, we also created a welcome video to accompany the tutorial modules. Literature on the use of video to enhance instruction has shown that there can be positive affective responses from students, which may translate into happier or even more engaged learners (Henrich and Prorak, 2010, 664; Borup, West, Thomas and Graham, 2014). Borup, West, Thomas and Graham (2014) noted that students in online or blended classes responded positively to the use of asynchronous video feedback by their instructors, reporting perceptions of instructors as being more real and friendlier (235-36). In our 30-second welcome video, the English Librarian personally welcomes students, and introduces them to the *SearchPath* tutorial.

Third Point of Contact
A second face-to-face class visit from the English Librarian takes place after students have completed the online tutorial. The Librarian engages students in a no-tech, hands-on learning activity, designed to develop essential critical-thinking and source evaluation skills. This activity directly maps to our discovery, during the 2012/13 English Library Instruction Program assessment project, of students struggling to assess and analyze the sources that they finding for assignments (Shamchuk *et al.*, 2013). As noted by Stowe (2011), it is easy enough for students to differentiate between a scholarly article and a magazine article if handed physical copies of, respectively, a scholarly journal and a popular magazine. The challenge, for students, lies in making these distinctions when looking at these same articles through the generic interface of a database (Stowe, 2011).

Accordingly, we chose to focus our instruction efforts on teaching source evaluation and critical thinking with a proven and portable hands-on learning activity adapted from our face-to-face sessions (Shamchuk and Plouffe, 2013). This activity, which takes place in the classroom rather than a computer lab, revolves around a folder of articles, from different types of information sources, covering a topic of interest. The articles have been printed directly from databases in an effort to simulate the generic aesthetic that students might encounter online.

Armed with a class set of identical folders, the librarian assigns students into groups, hands them a folder, and gives them 8 minutes to skim the folder contents. The students find, in the folder, one or more scholarly article(s), an article from a vested interest group, a definition from subject specific online encyclopedia, and an intriguing popular article. Each folder also includes a hypothetical essay assignment requiring one scholarly article, and also asking students to consider sources that offer different perspectives. Each group of students is given an opportunity to select and discuss one of the articles, sharing whether they felt it to be appropriate for the hypothetical essay question and justifying their evaluation. If an article is judged to be inappropriate, the Librarian directs the discussion towards a consideration of how such an article may be used in an argumentative essay. The instructor is also asked to weigh in on this discussion, reinforcing to students the importance of assessing the credibility and purpose of any secondary resource included in their research assignments. At the conclusion of this learning activity, students complete a short survey comprised of 2 demographic questions and 3 questions from the Information Literacy Assessment and Advocacy Project (ILAAP), a robust sharable survey tool for assessing the information literacy skills of higher education students in the province of Alberta (Goebel, *et al.,* 2013).

Notably, the timing of this second class visit is more critical than the first visit. Ideally, at the time of the second class visit, students have completed the SearchPath tutorial, thereby receiving instruction on topic development and research approaches. We also want to ensure that students are developing these evaluative skills *before* research assignments are due, but not so early that the activity is forgotten by the time they begin looking for sources for their assignments.

Fourth Point of Contact
Our 4th contact point with students occurs through drop-in research workshops offered through the Library's Learning Commons. As the vision for the Learning Commons is that the programming be open to all students, the drop-in workshops, called 'Research Essentials,' were marketed not only to English classes involved in the model but all students through the events calendar on the Library website as well as announcements on signage within the Library. The Research Essentials workshops were designed with a simple and intentional lesson plan. The short instructional component is comprised of a librarian-led learning activity where the student attendees work through authentic first-year English essay questions, identifying key concepts and brainstorming alternative terms. The students then get a reminder of the most basic Boolean strategies and of phrasal searching, and brief demonstration of entering the search in the Library discovery tool. Students then apply the same strategies with their own essay questions throughout the remainder of the workshop. The Librarian is involved individually with students, but also continues to share pertinent questions and answers with the group, building on teachable moments.

While the drop-in research workshops are not mandatory, they are strongly encouraged by the English Librarian during the two face-to-face class visits. Indeed, students are promised - during these visits - that if they come to the workshops with their research questions, then they will leave the workshop with their research started: They will have call numbers to print books, links to ebooks, and articles emailed to themselves. In the Fall 2013 pilot, we offered 10 drop-in Research Essentials workshops, starting half-way through the term. We increased the number of workshops to 25 in the winter term in an attempt to accommodate more students. Due to much reduced spring term enrollment, we offered 5 face-to-face sessions as well as 2 online drop-in synchronous research workshops in the final semester of the pilot. Over 200 students attended our drop-in Research Essentials Workshops throughout the three terms. As there were over 100 English courses participating to some degree in the blended model, this number works out to roughly only 7% of students voluntarily attending the workshops. Due to initial concerns about student attendance, some English teaching faculty opted to assign a participation mark for attending the workshop or added a workshop attendance grade on the students' research essay. These students were given a 'proof of attendance' bookmark to share with their instructor.

Implementation of the pilot
As we planned for the first pilot of the new 4 points of contact blended model in the Fall 2013 semester, our goal was to have 25% of the first-year classes who would normally receive traditional face-to-face library sessions moved to the new model. We deliberately chose a very modest goal: The English Librarian wished to avoid mandating a high-impact, large-scale change upon the English Department, and instead opted for a more collaborative change management model. The resulting implementation plan adopted a voluntary, early-adopter model to introduce this change in the English department, wherein the English Librarian presented the new model to a group of participants and then asked for volunteers to participate (Kelley, 2012). The pilot year was labor intensive and highly personalized. In the late summer, we met one-on-one with English faculty at

three campuses as they were placing their requests for fall Library instruction. In these meetings, the English faculty were given an overview of the new model, and we spent considerable time explaining the benefits, alleviating concerns, and making any minor adjustments to their course outline to accommodate the new schedule of class visits. Faculty were asked if they would be willing to volunteer to participate in the pilot, and a surprising number agreed to be early-adopters of the new 4 points of contact blended model. We were clear that we wished to keep the faculty informed and involved in the pilot process, and promised to provide them with opportunities to sharing feedback on the model.

From the very beginning, English faculty were especially excited about the idea of students getting multiple points of contact for reinforcing key research skills. Faculty also appreciated our efforts to build a culture of self-directed learning among students via the drop-in workshops in the Learning Commons and the online tutorials. Five years ago, MacEwan University existed as Grant MacEwan Community College. Accordingly, the pedagogical shift in Library instruction towards self-directed learning was seen to be more in line with what we should expect from university-level students. The new model also responded to an often lamented problem: the poor quality of information sources seen in student reference lists. Faculty were pleased to hear that we would be spending time developing critical thinking and evaluation skills during the 3rd point of contact learning activity. Ultimately, English faculty support for the move to the new Library IL model exceeded our expectations. Our early adopters model led to 42% of the first-year English classes voluntarily participating, which was well beyond our original goal of 25%.

Results from the pilot
Library instructor feedback
While the goal of the blended model was to have the English Librarian ultimately take on all of the class visits and most of the drop-in workshops, more than half of the first-year English courses still required traditional face-to-face instruction during the Fall 2013 pilot. Accordingly, many members of the Library instruction team were involved at various points in the blended model. During a debrief session in November 2013, these Librarians shared their thoughts on the experience. Overall, this feedback was very positive. They saw the multiple points of contact as being very good for building relationships with students. They also felt it was great to meet with the students on their own turf: in *their* classroom, rather than simply in the Library computer lab. It was also recognized that because there was little to no prep time required for the evaluating sources activity, all the work having been done beforehand, library colleagues could step in to assist at extremely short notice if necessary. The four librarians involved in meeting with students at the 3rd point of contact gave extremely positive feedback, observing that students and often the instructors were very engaged in the hands-on evaluating sources activity. The English Librarian, who was responsible for planning, scheduling, and coordinating with English faculty, also reported that there was far less time spent preparing for tailored sessions, booking computer labs, negotiating schedules, and confirming assignment details in back-and-forth email exchanges with faculty.

Faculty feedback
Following the Fall 2013 pilot, the English Librarian requested feedback on the new 4 points of contact model from all participating English faculty members. The majority of responses from faculty were positive about the new model. Some faculty appreciated having more classroom instruction time to cover material with their students. Whereas the former model required them to give up a full class to bring their students to the Library for a traditional face-to-face library session of 50 or 80 minutes, they now had the Librarian *come to them* and take up only a fraction of the time: 10 minutes at the beginning of the semester, and 30 minutes during the 3rd point of contact source evaluation activity. Many English instructors also valued the multiple chances students had to meet with the Librarian, and they were particularly happy to have the brief introduction take place so early in the term. English Faculty also generally embraced the philosophy of student-directed learning - of allowing opportunities for students to take more responsibility for their own learning through the drop-in research workshops. Of those instructors who were concerned about students not seizing the opportunity to attend one of the drop-in sessions, most were satisfied with the simple solution of having the Librarian provide a "proof of attendance" for students to submit to the instructor.

There were, however, a few faculty members who expressed concerns with the loss of mandated librarian-facilitated research time for students, and the subsequent impact on quality of sources used in research assignments. In one such case, the English Librarian personally met with the English faculty member to listen to concerns regarding the quality of the research assignments. The faculty member noted a significant number of assignments that were poorly researched, and wondered if this resulted from the new blended model approach we had been piloting in her class. However, after reviewing individual student progress in and completion of the online SearchPath tutorial, both the Librarian and the Faculty member were able to identify correlations between quality of the research assignments and the amount of time logged by students in the online tutorial. That is, students spending more time in the tutorial in this particularly class tended to fare better on the research assignment. Again, this evidence is of a single case, and cannot be construed as being representative of all students. This will be a question that we would like to investigate further in a more formal manner.

Student feedback
The 4th point of contact drop-in workshops received very positive anecdotal feedback from many of the students who attended. Librarians who facilitated the drop-in, face-to-face workshops noted that students were engaged and often vocalized their appreciation for the usefulness of the workshop. Among the 200+ students who attended drop-in workshops over the pilot year were several students who voluntarily attended more than one workshop. Some of these repeat attendees came to further their work on English assignments, and others came to apply the sessions to research assignments in other subjects. This repeat attendance, and recognition of the applicability of the workshop content to other disciplines, demonstrated to us that the students valued the time spent in these sessions. Feedback received following the inaugural online synchronous drop-in workshops included the comments "this has been very concise and helpful" and "gave me specifically what I was looking for" (Research Essentials Online Feedback, 2014). In

future, we would like to collaborate with English faculty to identify correlations between student success on assignments and their participation in these drop-in workshops.

More substantial feedback was received during the 3rd point of contact, through the results of an assessment questionnaire administered on paper following the hands-on source evaluation activity. The assessment instrument was administered in paper format and consisted of a series of questions drawn from the Information Literacy Assessment and Advocacy Project questionnaire. The Information Literacy Assessment and Advocacy Project (ILAAP) is a province-wide post-secondary initiative; Goebel, Knoch, Thomson, Willson and Sharun (2013) describe the development and application of the robust, sharable ILAAP survey tool used for assessing the information literacy skills of post-secondary students in Alberta. Each of the ILAAP survey questions are tied to ACRL (2000) Information literacy competency standards for higher education (Goebel, et al., 2013; Sharun, *et al.*, 2014). For the survey administered at the 3rd point of contact in the first semester of our pilot, the English Librarian and Instructional Design librarians identified questions contained in the ILAAP pool that could be used to measure learning taking place through the source evaluation activity. Research ethics review approval was granted to the ILAAP team for their own research purposes, and students who completed the assessment questionnaire in the Fall 2013 semester provided their informed consent for the inclusion of student data in the ILAAP project.

ILAAP questionnaires were completed by 554 students in MacEwan first-year English during the Fall 2013 semester. For feedback on the 3rd point of contact source evaluation activity, we looked to the responses to the question pertaining to identifying aspects of scholarly articles. All of the students who completed the questionnaire responded to this question, and 89%, or 491 of 554 students, correctly recognized characteristics of a scholarly article. We were very pleased with the results, which seemed to demonstrate that our efforts of concentrating instruction time on developing skills for source evaluation were having an impact.

Students completing the online for-credit *SearchPath* tutorial as part of the 2nd point of contact in our blended model answer assessment questions for each of the five models. Yet in our pilot year we did not have access to this data. Because the tutorial is a required for-credit component for first-year English courses, it had for many years been accessed online as a learning module embedded in the course/section of English in the University's Learning Management System, BlackBoard. While there are many advantages to this method, not the least of which is simple, easy, intuitive access to the online tutorial for students, the disadvantage to us is that only the course instructor has access to any of the assessment data, and, because of student privacy policies, the instructors were not able to share that course data with us.

During the Fall semester of our pilot year, we attempted to collect some data as to what students were learning in the online tutorial via the ILAAP questionnaire administered at the 3rd point of contact, which generally occurred a few weeks after the completion of the online tutorial. 530 students answered two ILAAP questions on identifying main topic ideas and developing effective search strategies. Of these 530 students, 82%, or 434

of the 530 respondents, could correctly select the best keywords for a specified topic. However, students struggled with questions relating to basic Boolean searching, with only 47%, or 249 of the 530 respondents, demonstrating an understanding of the impact of using AND and OR in phrasal searching. Note that one additional group of 24 students was given a different question solely pertaining to Boolean searching, with only 42%, or 10 of 24, demonstrating an understanding of the impact of the use of AND and OR. We were pleased to see that students were demonstrating an ability to identify the main concepts in a research topic (82%), but less than happy with the results as they pertained to Boolean searching (47%, & 42%). We were also aware that it may speak more to the retention of the learning being passed on in the online tutorial, which may be completed some weeks before the 3rd point of contact, or even to the lack of context (i.e. the questions being asked in the classroom through a paper survey following an unrelated hands-on activity). Because of these lingering questions, and particularly because of the lack of context for the administration of the assessment, we did not feel like we could interpret the results of the paper-based questionnaire as an effective assessment of learning for the online tutorial. We recognized that it would be invaluable for the Library to gain access to the online tutorial assessment data in future.

Challenges for full implementation
Scheduling drop-in research workshops
While we were happy with the number of students who *did* voluntarily participate in one of our drop-in research workshops (244 in total), there were direct and indirect reports of students who could not find a drop-in workshop to fit their schedules. This was particularly true in the Fall 2013 pilot, where we only ran 10 drop-in sessions spaced throughout the semester. Our attempt to accommodate more students in the Winter 2014 semester of the pilot, increasing the number of drop-in workshops to 25, meant that there were many drop-in sessions for which no students attended. Also, the two online workshops that were run in the Spring 2014 semester had very low turnout (2 students total). In order to avoid these issues for the first full implementation of the blended model in the Fall of 2014, we looked at the statistics on attendance. Not surprisingly, there was a very evident peak in the number of students attending workshops close to the actual assignment due dates. Recognizing that the timing of these workshops is critical to their success in terms of student use and student attendance, Fall 2014 drop-in Research Essentials workshops have been scheduled in a concentrated six week period closer to assignment due dates. Such scheduling will hopefully ensure options and opportunities for research instruction and support at students' *actual* point-of-need rather than our own perceptions of their point of need.

Marketing
Throughout the pilot, all advertising and promotion of the drop-in research workshops was done in-house by members of the Instruction team. Handouts listing all of the upcoming dates for the research workshops in the library were distributed to students during the 1st point of contact, and left at the reference desk. A large whiteboard positioned strategically near the reference desk also advertised upcoming drop-in research workshops. We recognized that the lack of any actual publicity and marketing may have had some negative impact on the numbers of students who attended our drop-in

workshops, particularly when there was no clear or consistent message as to where and when these workshops were being offered. Even some of the other librarians were not sure when the drop-in sessions were taking place when students asked. Beginning in the Spring of 2014, the Library Instruction team began to work with one of the University's graphic designers in the development of marketing materials, all with a similar look and feel. We now have well-designed and similarly branded material: Handouts given out during the first class visit, outlining the steps for completing the online tutorial and directing students to the drop-in workshop schedule on the Library website; posters advertising our drop-in *Research Essentials Workshops*; and proof of attendance bookmarks for students whose instructors mandate attendance in the drop-in workshops for class credit.

Getting access to assessment data from the online tutorial
The move to a greater reliance on the online tutorial, as a critical instructional component in the new model, meant that we needed to be able to assess the learning that was taking place through the tutorial modules. Following many conversations with our institutional Learning Management System (LMS) managers, the English department stakeholders, and our library instruction team, it was determined that the simplest solution would be to run the for-credit online information literacy tutorial as its own course in the LMS. The Library was already responsible for the development of the content and the quiz components of the online tutorial, and so it made sense for the Library to manage the administrative aspects as well. With the Instructional Design Librarian and English Librarian as designated course instructors, the Library would have access to the assessment data collected through the quizzes. In cooperation with the LMS managers, Library instructors are now able to export, sort, and send student grades to the English instructors, who in turn assign course credit for the tutorial as determined in the master course syllabus for first-year English. The pilot for the self-enroll, stand-alone for-credit online Library tutorial was run in the Spring 2014 semester. For the first time, we were able to see the results of the assessments: 45 of the 46 students who completed the online tutorial received a score of 80% or greater on the assessments. Running the course with 46 students was a success; we are interested in seeing how everything functions when we have between 1500 and 2000 students self-enrolled in the tutorial during the first full implementation in the Fall 2014 semester.

Areas for future consideration
Incorporating online sources into the hands-on source evaluation activity
In the Summer of 2014 the MacEwan University Library purchased a class-set of iPads. We would like to explore the possibility of conducting our hands-on source evaluation activity during our 3rd point of contact using iPads. In this way we could reduce the printing of paper. We could also allow for a more authentic source evaluation activity by using electronic sources as they would appear to students in the 'real world' on a screen. Students would also be able to analyze other types of sources as well, such as blogs.

Assessing the model as a whole
While we are working at gathering assessment data from the various components of the blended model, we need to consider how we can assess the model as a whole. How well

is the scaffolding of learning taking place through each point of contact? Does the drop-in research workshop effectively build upon concepts introduced in the online tutorial? And, ultimately, is there a tangible impact of full participation in the blended model on student performance in the research assignments submitted in their first year English classes?

Adapting for other subject areas
Based on the success of the pilot, we have developed similar blended models to be applied to other disciplines as well. In the Fall 2014 semester we are piloting modified blended models for Nursing, History and Classics courses. In History and Classics our subject specialist will not be replacing the 3rd point of contact class visit with a discussion forum in the for the course on the university LMS, thereby offering assignment specific research support at the student point-of-need. Looking further ahead we will be piloting a blended model for our Business students in Fall 2015.

Conclusion
At the time of writing this, in Fall 2014, the full implementation of our new model is occurring. All information literacy instruction for our core first-year English classes is now taking place through the 4-points of contact blended model. Notably, as the English Librarian schedules the two face-to-face class visits for each of the 160+ sections of English over the coming year, it has become clear that the blended model does not take less of her time. Rather, the preparation, which now takes place prior to the start of class, and the face-to-face instruction, now broken into three shorter sessions, are more evenly distributed throughout the academic semester. Whereas in past years several librarians were required to teach the face-to-face sessions in a few concentrated, critically timed weeks prior to research assignment due dates, the English Librarian can manage most of the instruction herself in this new model. We did not quite meet our goal of having the English Librarian take on all the instruction work alone, and several librarians liaising with other programs are involved in the drop-in Research Workshops in the Library's Learning Commons. The pilot promised a more sustainable program of library instruction; we will need to assess, at the end of the current semester, whether the new model is truly sustainable, given the amount of actual librarian time required to maintain the blended 4 points of contact program.

The success of our pilot and our positive experiences, to date, in fully implementing our new IL instruction model has hinged on the involvement of English faculty across the process. The early-adopter method of program change employed by the English subject librarian meant that meaningful communication was taking place with faculty well before the initiation of the pilot of the new model and throughout its implementation. Concerns expressed by English faculty were listened to and responded to throughout the pilot, and these concerns have helped shape the program that currently being implemented in full. That we had 42% of English sessions piloting the new model for Fall 2013, which far surpassed our initial target of 25%, speaks to the respectful relationship the English Librarian has developed with faculty. Indeed, because of this mutual respect, open communication, and trust between the English department and the Library, we have within one academic year moved the entire English Library Instruction Program from face-to-face one-shot library sessions to our fully blended 4 points of contact model.

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