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## THE INTEGRATION OF INFORMATION LITERACY SKILLS INTO THE CURRICULUM

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### **Abstract**

This paper will discuss the conclusions of the evaluation for the Information Literacy Skills Modules that were integrated into the curriculum of five online Early-European History undergraduate self-paced courses, offered at Athabasca University (AU). The Skills Modules were incorporated to address serious academic integrity issues students have been struggling with. The modules were designed with the view of improving students' research skills, informing students how to avoid plagiarism, raising their awareness of the rigorous principles of academic integrity, and complete their research assignments successfully. The Skills Modules are taken by students in parallel to the course content and are strategically linked to research assignments. Students' knowledge acquired in the Modules is evaluated by automated online quizzes. In the research assignments students are expected to transfer, apply and demonstrate the information literacy skills learned in the Skills Modules. Through this exploratory survey we learned about students' perceptions and how the Skills Modules assist them on conducting and completing their research paper assignments. Last year, a poster with preliminary findings was presented and discussed at the EDEN –Barcelona conference (Guadarrama, et al., 2015). After 2 years of data collection, the final evaluation report discusses how to enhance the design of the Information Literacy Modules and their curriculum integration in History and Humanities courses based on students' views and perceptions, results obtained by students in their assignments, and the final marks obtained by students in the History courses. This discussion also integrates the course coordinator and tutors perceptions about the Skills Modules based on their teaching experience having the Skills Modules embedded in courses. The results will be disseminated at AU, and national and international conferences with the view of improving course design practices. The evaluation results aim to assist professors looking for solutions to address academic integrity issues in courses where students are expected to write research papers.

### **The problem**

For a long time, professors and tutors have been complaining about students' performance when it comes to writing research papers. Unfortunately, many students are not fully aware of the rigorous principles of academic integrity. As in other humanities and social science courses, many students in history-type courses tend to perform poorly because many have not sufficiently mastered the IL skills they need to complete research assignments satisfactorily. In

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fact, some are unfamiliar with the study of history at a university level, and others have undeveloped research and writing skills. There is a strong indication that the lack of IL skills not only limits students' performance and learning but also results in academic misconduct, such as cheating and plagiarism. Instructors report they have tried various preventive and remedial measures hoping to enhance students' performance and alleviate their frustrations. However, none of these measures have provided a satisfactory solution. The integration of Information Literacy Skills into the curriculum seems to be a successful solution, though, to this long-term problem.

### **The solution adopted – The integration of IL skills into the curriculum of history courses**

To address students' lack of information literacy (IL) skills, IL skills modules were integrated into the curriculum of five history courses to assist students in producing their assignments satisfactorily, improving their performance, and avoiding academic misconduct and plagiarism. Keeping in mind past practices, a multidisciplinary group (a librarian, an editor, and a learning designer, the course coordinator) got together with the course coordinator to assess the context, discuss previous experiences, and determine a better and more effective solution. Then, instruction was designed, the skills modules were documented, and learning materials were designed and developed. After that, the skills modules were integrated into history courses, along the study guide and strategically connected to the work students have to produce, the criteria they have to meet, and the expectations they have to satisfy to complete their assignments. Since experience has shown that students tend to avoid non-credit materials (library tutorials, style guides, abstract written instructions, etc.), the skills modules were linked to credit assignments so students could not ignore them. First, automated quizzes were designed to reward students' knowledge acquired in the skills modules without creating extra work for tutors. Secondly, the skills modules were made explicit in the instructions, rubrics, and evaluation criteria for assignments which break down the process to complete research papers. Last but not least, the skills modules were reflected in directions and instructions for final exams, which include essay questions. Students have been taking the Skill Modules for more than two years and results show that the strategy is effective and working well for students. Students have welcomed the strategy positively.

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Learning Units (Course Content)	Assignments	Information Literacy Skills Students need for assignments
1 Introduction to Course	<b>Assignment 1:</b> Review of a Scholarly Article <ul style="list-style-type: none"> <li>• Select from one of 3 scholarly articles about Early Middle Ages</li> <li>• Critically read the essay</li> <li>• Write a report analyzing and appraising the article following detailed instructions</li> <li>• Use library search tools to find at least 3 more writings by the article's author</li> </ul>	<b>Skills Module 1: Library Research Skills</b> <ul style="list-style-type: none"> <li>• Identifying scholarly writings: books and articles</li> <li>• Searching AU's online library catalog</li> <li>• Searching AU's online journal databases</li> <li>• Research exercises</li> </ul>
2 Ancient Greece		<b>Quiz 1: Library Research</b> <ul style="list-style-type: none"> <li>• Prepares students for written assignment</li> </ul>
3 Ancient Rome		<b>Skills Module 2: Reading Scholarly articles</b> <ul style="list-style-type: none"> <li>• Critically reading a scholarly essay</li> <li>• Recognizing a scholarly essay</li> <li>• Analyzing its parts</li> <li>• Following a historical argument in a scholarly essay</li> <li>• Appraising essays</li> <li>• Prepares for Assignment 1 and 3</li> </ul>
4 Post-Roman Europe		<b>Skills Module 3: Chicago-Style Documentation</b> <ul style="list-style-type: none"> <li>• Reason for documentation</li> <li>• When to cite</li> <li>• Using the Chicago-Style</li> <li>• Documentation exercises</li> </ul>
5 Early Middle Ages		<b>Quiz 2: Documentation Quiz</b> <ul style="list-style-type: none"> <li>• Prepares for Research Essay (Assignments. 2 and 3)</li> </ul>
6 High Middle Ages	<b>Assignment 2:</b> Essay Plan and Proposed Bibliography <ul style="list-style-type: none"> <li>• Chose from among the assigned research paper topics</li> <li>• Write a 1 page essay proposal</li> <li>• Attach a bibliography of 6 or more scholarly books or articles</li> <li>• Indicate how the items were found</li> </ul>	<b>Skills Module 4: Organizing a History Essay</b> <ul style="list-style-type: none"> <li>• Purpose of essay assignments</li> <li>• Features of essays</li> <li>• History Essay Elements</li> </ul> (No quiz: prepare for Research Assignment 3 and final Exam)
7 Middle Ages II		<b>Skills Module 5: Using Evidence in a History Essay</b> <ul style="list-style-type: none"> <li>• When and how to</li> <li>• summarize</li> <li>• paraphrase</li> <li>• and quote</li> </ul>
8 Late Middle Ages		<b>Quiz 3: Using Evidence</b> <ul style="list-style-type: none"> <li>• Prepares for Assignment 3 (Research Essay)</li> </ul>
9 Renaissance and Reformation		<b>Skills Module 6: Academic Integrity: Avoiding Plagiarism</b> <ul style="list-style-type: none"> <li>• Avoiding Plagiarism</li> <li>• Common Questions about Plagiarism</li> <li>• Detecting Plagiarism</li> <li>• Mastering the Techniques for Giving Fair Credit</li> </ul>
10 States and Capitalism	<b>Assignment 3:</b> A research essay in response the student's choice of topics from a list of assigned questions. <ul style="list-style-type: none"> <li>• Must use at least 4 scholarly books and/or articles</li> <li>• Must use Chicago-Style documentation</li> <li>• Must conform to History essay norms</li> <li>• Must avoid plagiarism</li> </ul>	<b>Quiz 4: Academic integrity</b> <ul style="list-style-type: none"> <li>• Prepares for Assignment 3 (Research Essay)</li> </ul>
11 Wars of Religion		
12 Absolutism and the Limits of Early Modernity		

Figure 1. Example of the Integration of Information Literacy Skills into the curriculum: History 215: Europe: Ancient to Early Modern: Course Map

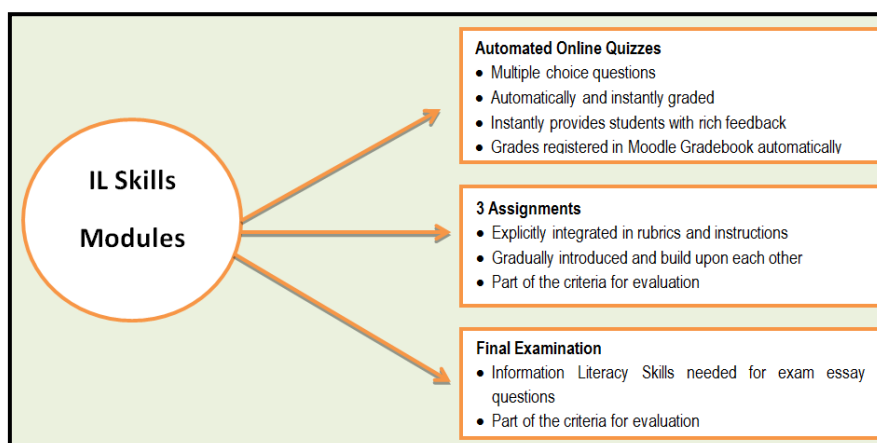


Figure 2. ILs modules are not 'optional' materials ignored by students. The Skills Modules are evaluated in three different ways

## **Theoretical Framework**

The Information Literacy Competency Standards for Higher Education (ACRL, 2000) framework was adopted to design the Information Literacy Skills instruction and integrate them into the curriculum of history courses. It became clearer that a new attempt to enhance students' performance needed the information literacy skills instruction aligned to learning activities, assignments, and evaluations. The information literacy skills modules were integrated keeping in mind how the ACRL defines that "an information literate 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,
- Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally." (ACRL, 2000).

## **Methodology**

### ***Purpose and Significance of the Study***

The main purpose of this evaluation is to inform course design practices at AU. It is important for AU's academic community to learn how the Skills Modules strategy works for students, if it works in the way it was planned, if it needs to be enhanced and how, and if it brings unintended benefits that may have arisen. Based on students' perceptions, it is expected the findings would shed light on how to make the modules as effective as possible for them. This evaluation intends to inform course design practices across AU faculties. It is expected the findings will be disseminated in the AU academic community with the view of enhancing course design practices. Other academics may find the Skills Modules suitable for their students and may want to adapt them into their own courses. Beyond AU, we intend to disseminate the findings in national and international conferences to discuss the Skills Modules with academics in other institutions, who may be facing the same issues. We intend to publish in national and/or international academic journals. Also, we intend to release the Information Literacy Skills Modules to the public under a creative commons license so that anyone in the public could use/adapt them in their own courses.

### ***Delimitations of the Study***

This study involves the following undergrad, online, self-paced, individualized three-credits courses:

- History 215: Europe: Ancient to Early Modern;
- History 371: Early Medieval Europe: 400–1000 (Rev. A2);
- Humanities 312/ Classics 312/ History 312: Ancient Rome (Rev. C1);
- Humanities 313/History 313/Religious Studies 313: Early Christians (Rev. C1);
- History 383: The Vikings (Rev. C1).

The Information Literacy Skills modules integrated in the above courses are focused on Chicago Style for students who are conducting research in the field of history. The modules have been adapted for other styles.

The five history courses may get 130 students a year. Students have 6 months to complete the course. Since the survey is only available to students until they submit the last assignment in the course, data is coming in slowly.

### ***The survey***

A survey was designed to collect data about students' perceptions concerning the use of the information literacy skills in their courses. The focus for this exploratory non-experimental survey is to gather information from students about how the IL skills modules assist them on:

- improving their performance while completing their research assignments;
- searching for academic sources;
- identifying peer-reviewed scholarly articles;
- distinguishing between primary and secondary sources of information;
- organizing and writing their research papers;
- quoting and referencing properly their sources of information;
- using Chicago style properly;
- avoiding plagiarism;
- applying the academic integrity principles in their work.

### ***How the survey was integrated?***

The survey was designed in such a way that its sections reflect the research process students have to go through to complete their research assignments. The organization and sequence of the survey reflects the one in the skills modules. Both, the ACRL framework and the skills modules were used to design the questions of the survey. The organization, the sequence and questions of the survey may facilitate students recalling their experience while answering the survey.

To increase the reliability of the survey, it was reviewed and enhanced by a multidisciplinary group integrated by the acting director, AU Library Services, the coordinator of the history courses, by other AU researchers, and by AU learning designers who have a wide experience in educational research. The same group of experts also participated in the design of the skills modules.

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Evaluation Core Questions:

- To what extent do students perceive their performance improve because of the IL skills standards integrated into the curriculum of history courses?
- What are students' perceptions of the Skills Modules?
- To what extent do students think the IL skills modules inform them on using the library efficiently?
- To what extent do students consider the IL skills modules improve their understanding for completing their assignments?
- To what extent do students estimate the ISLs modules guide them to adhere to principles of intellectual integrity?

### **Participants**

All students who complete the last assignment are invited to complete the survey. After submitting the last assignment, an invitation and a link for students to access the survey become available. Students who decide to participate complete the survey after submitting the last assignment and before getting their final mark. Participation is on voluntary basis and completely anonymous.

### **Data collection**

The survey is still available for students since August 2014 and will be available at least until April 2015.

### **Reporting the findings**

The final evaluation report will be presented to the AU community with the view of enhancing course design practices. Internal dissemination of the findings will first occur among other AU subject matter experts, course coordinators, and designers at the institutional level. Results will be presented to the AU community through workshops and lectures. It is anticipated that findings and results will be also presented in national and international conferences and published in academic journals.

Data Analysis: The survey is still in place and data continue being collected until May 2016. The findings come from the answers of respondents and reflect the tendencies found in the data. In the survey it was used a 1 – 5 Likert where 1 (*strongly disagree*) and 5 (*strongly agree*). The final report will include the analysis quantitative and qualitative data.

## References

1. Alfino, M., Pajer, M., Pierce, L., & O'Brien Jenks, K. (2008). Advancing Critical Thinking and Information Literacy Skills in First Year College Students. *College & Undergraduate Libraries*, 15(1-2), 81-98.
2. Andrews, T., & Patil, R. (2007). Information literacy for first-year students: an embedded curriculum approach. *European Journal of Engineering Education*, 32(3), 253-259.
3. Association of College and Research Libraries (2000). Information Literacy Competency Standards for Higher Education. Retrieved May 10, 2014 from <http://www.acrl.org/ala/mgrps/divs/acrl/standards/standards.pdf>
4. Badke, W. (2008). Ten Reasons to Teach Information Literacy for Credit. *Online*, Nov/Dec2008, 32(6), 47-49.
5. Buchanan, L. E., Luck, D. L., & Jones, T. C. (2002). Integrating Information Literacy into the Virtual University: A Course Model. *Library Trends*, Fall 2002, 51(2), 144-166.
6. Dadzie, P. S. (2009). Information Literacy in Higher Education: Overview of Initiatives at Two Ghanaian Universities. *African Journal of Library, Archives & Information Science*, 19(2), 165-175.
7. Daugman, E., McCall, L., & McMahan, K. (2011). Designing and Implementing an Information Literacy Course in the Humanities. *Communications in Information Literacy*, 5(2), 127-143.
8. Decarie, C. (2012). Dead or Alive: Information Literacy and Dead(?) Celebrities. *Business Communication Quarterly*, Jun2012, 75(2), 166-172.
9. Detlor, B., Booker, L., Serenko, A., & Julien, H. (2012). Student perceptions of information literacy instruction: The importance of active learning. *Education for Information*, 29(2), 147-161.
10. Dewald, N., Dcholz-Crane, A., Booth, A., & Levine, C. (2000). Information Literacy at a Distance: Instructional Design Issues. *The Journal of Academic Librarianship*, 26(1), 33-44.
11. Guadarrama, L., & Cels, M., et al. (2015). *Integrating Information Literacy and Research Skills into the Curriculum*. Poster presented at the EDEN 2015 Annual conference Expanding Learning Scenarios, 2014. Conference program, ISBN 978-615-5511-02-8, 108.
12. Johnston, N. (2010). Is an Online Learning Module an effective Way to Develop Information Literacy Skills? *Australian Academic & Research Libraries*, 41(3), 207-218.
13. Kumar, S., & Edwards, M. E. (2013). Information literacy skills and embedded librarianship in an online graduate programme. *Journal of Information Literacy*, Jun2013, 7(1), 3-17.
14. Kumar, S., Ochoa, M., & Edwards, M. (2012). Considering Information Literacy Skills and Needs. *Communications in Information Literacy*, 6(1), 91-106.

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15. Price, R., Becker, K., Clark, L., & Collins, S. (2011). Embedding information literacy in a first-year business undergraduate course. *Studies in Higher Education*, 36(6), 705-718.
16. Tunon, J., & Ramirez, L. (2010). ABD or EdD? A Model of Library Training for Distance Doctoral Students. *Journal of Library Administration*, 50(7/8), 989-996.

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