

From: Craig Pilant/Kathryn Shuck, Co-chairs, General Education Committee

To: Dr. Dwight Smith, Vice President for Academic Affairs

Re: Information Literacy Assessment Pilot – Academic Year 2014 – 2015

Date: June 15, 2015

Attached are the summary report and the individual course reports for information literacy pilot assessment program for the Academic Year 2014 – 2015.

Respectfully submitted,

Craig W. Pilant

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Kathryn Shuck

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On Behalf of the General Education Committee

GENERAL EDUCATION OUTCOMES ASSESSMENT

INFORMATION LITERACY – PILOT

ACADEMIC YEAR 2014 – 2015

General Education Committee
June 15, 2015

General Education Outcomes Assessment Information Literacy - Pilot Spring 2015

During the 2014-2015 academic year, the County College of Morris General Education Committee undertook the task of implementing a college wide assessment program for the general education integrated learning goal of information literacy. With the support of the academic departments, a pilot program was implemented in the Spring 2015. Included in this report are the results of the pilot assessment program as well as recommendations for changes in future assessments.

The learning goal for information literacy courses is that students will address an information need by locating, evaluating and effectively using information. The information literacy learning goal has five learning outcomes as specified by the NJCCC. They are:

- a. Students will identify and address an information need.
- b. Students will access information effectively and efficiently.
- c. Students will evaluate and think critically about information.
- d. Students will use information effectively for a specific purpose.
- e. Students will use information ethically and legally.

Assessments of one or more of the information literacy learning outcomes were administered in Spring 2015 (and in some cases Fall 2014) in the courses indicated in Table I.

Table I: Information Literacy Assessment Participation by NJCCC General Education Category

Gen Ed Category	Information Literacy Courses	Students Assessed	Percentage per Category
Communications	COM 109 ENG 112/132	1091	57%
Mathematics	MAT 124/130/183	213	11%
Science	BIO 122/132/133	383	20%
Technology	CMP 126	69	4%
Social Science	PSY 113	47	3%
Humanities	ART 133/134	102	5%
History		0	0%
Diversity	ART 133/134*	102*	5%*
TOTAL		1905	100%

*ART 133/134 falls within both the Humanities and Diversity categories. Numbers listed for ART 133/134 were only counted once in the total.

The assessments for each course were used to categorize the skill level of the students taking the assessment into one of three categories:

1. Highly Developed Skills
2. Sufficiently Developed Skills
3. Insufficiently Developed Skills

The detailed assessment report for each course was prepared by the academic department responsible for the course. These reports include the assessment methodology, results, conclusions and next steps. They will be used by the departments to understand and improve the way information literacy is addressed within the general education courses in their department. The course level reports are attached in Appendix A.

The results from each course were consolidated to summarize student performance relative to information literacy on a college wide basis. The consolidated results are summarized in Table II. The course level details are attached in Appendix B.

Table II: Consolidated Information Literacy Results for Fall 2014 – Spring 2015 Semesters

Category	Number of Students Assessed	% of Total Students Assessed in Each Category
Highly Developed Skills	710	37.3%
Sufficiently Developed Skills	765	40.2%
Insufficiently Developed Skills	430	22.6%
TOTAL	1905	100%

The results show that 77.5% of the students assessed have highly developed or sufficiently developed information literacy skills. Only 22.6% have insufficiently developed information literacy skills. These results provide a concrete benchmark against which we can strive to improve in the future.

Based upon the experience of implementing and analyzing the results of the information literacy pilot assessment program, we recommend the following changes for the future.

- Courses from each General Education category need to be represented in this assessment. Therefore we need for the History Department to develop an information literacy assessment process for one or more of their general education courses.
- Increase representation in the Social Science category by assessing more sections of PSY 113 (planned) and possibly by adding a sociology course.
- Consider the optimal timing for future assessments so that there is adequate time for analysis, reflection and change prior to the next assessment cycle.

- Work with individual departments to enhance their assessments/reports as needed.
- Consider if it is possible to incorporating departmental information literacy reports into the discipline specific general education reports in order to lessen the administrative burden on the departments.

The committee commends the participating departments and faculty for all of their hard work and support in the development and implementation of this assessment program.

APPENDIX A
General Education Information Literacy Assessments
Departmental Reports

COMMUNICATIONS

COM 109 – Speech Fundamentals
ENG 112 – English Composition II
ENG 132 – English Composition II, Honors

MATHEMATICS

MAT 124 – Statistics
MAT130 – Probability and Statistics
MAT 183 – Honors Probability and Statistics

SCIENCE

BIO 122 – General Biology II
BIO 132 – Concepts in Biology
BIO 133 – Human Biology

TECHNOLOGY

CMP126 – Computer Technologies and Applications

SOCIAL SCIENCE

PSY 113 – General Psychology

HUMANITIES/DIVERSITY

ART 133 – Art History I
ART 134 – Art History II

INFORMATION LITERACY OUTCOMES ASSESSMENT REPORT

INSTRUCTIONS: Complete this form for each course being assessed for the integrated learning goal, Information Literacy. The numerical results for all sections of this course (e.g. ENG 111) need to be aggregated in the data summary section. If there are variations in assessment instrument or methodology by section of this course, all of the various instruments/methodologies should be described in this report. Use as much space as required for each category.

1. **Course** (e.g. ENG 111 – English Composition I)

COM 109 – Speech Fundamentals

2. **Semester**

Spring 2015

3. **Learning Objectives/Outcomes**

(Please note that the learning outcome below was determined by a collective of public speaking instructors from across the state at the Summit on Learning Outcomes.)

Students will analyze audiences, choose and research topics, organize speeches, and cite sources to support their speaking purpose(s).

4. **Description of Assessment Methodology / Process** (e.g. how was assessment administered, how were results interpreted, was a sampling process used.) Attach rubric(s) if appropriate. Document all variations used.

The assessment will be administered as a portion of the overall outcomes assessment instrument for the Speech Fundamentals course. Results will be interpreted using descriptive statistics on the total population that detail correct/incorrect responses in three categories: *highly developed*, *sufficient*, *insufficient*. Students who answer fewer than two of the four questions correctly will be labeled as “insufficient.” Those who answer two or three of the four questions correctly will be labeled as “sufficient.” And those who answer all four of the questions correctly will be labeled “highly developed.”

5. **Assessment Instrument.** Attach the actual assessment/assignment or provide a description of the assessment/assignment. Document all variations used.

See attached section is taken from the book *Telling Your Story: A Narrative Approach to Public Speaking*. The corresponding questions were developed for the above stated learning objective.

6. Data Summary for Course

Category	Number of Students Assessed	% of Total Students Assessed in Each Category
Highly Developed Skills	70	23%
Sufficiently Developed Skills	116	38%
Insufficiently Developed Skills	117	39%
TOTAL	303	100%

7. Conclusions

There's a significant deficit of students who have "highly developed" information literacy skills according to the measure described above.

8. **Next Steps** (*e.g. identify any changes to the way information literacy will be taught in the future based on the results or any changes planned for the assessment or assessment methodology*)

Place greater emphasis on implementing the existing instructions and exercises described in the textbook, *Telling Your Story: A Narrative Approach to Public Speaking*.

- IL 46. Which of the four tiers of sources does an "academic book" belong to?
- Tier One
 - ~~Tier Two~~
 - Tier Three
 - Tier Four
- IL 47. Which of the four tiers of sources does a "documentary film" belong to?
- Tier One
 - Tier Two
 - Tier Three
 - ~~Tier Four~~
- IL 48. Which of the four tiers of sources does a paper published in a "peer-reviewed journal" belong to?
- ~~Tier One~~
 - Tier Two
 - Tier Three
 - Tier Four
- IL 49. Which of the four tiers of sources does a "trade book" belong to?
- Tier One
 - Tier Two
 - ~~Tier Three~~
 - Tier Four
- IL 50. If you needed to complete an important research project about human communication and each of the following sources had similar information that was relevant to your argument, which one would you choose based on its "tier one" status?
- A *Time* magazine article.
 - A documentary produced by the *British Broadcasting Corporation* (BBC)
 - Your *Speech Fundamentals* textbook.
 - ~~*Communication Quarterly*, a publication of the *Eastern Communication Association*.~~

INFORMATION LITERACY OUTCOMES ASSESSMENT REPORT

INSTRUCTIONS: Complete this form for each course being assessed for the integrated learning goal, Information Literacy. The numerical results for all sections of this course (e.g. ENG 111) need to be aggregated in the data summary section. If there are variations in assessment instrument or methodology by section of this course, all of the various instruments/methodologies should be described in this report. Use as much space as required for each category.

1. **Course** (*e.g. ENG 111 – English Composition I*)
ENG 112 – English Composition II
ENG 132 – Honors English Composition II

 2. **Semester**
Spring 2015

 3. **Learning Objectives/Outcomes**
 - 1) Students will identify and address an information need.
 - 2) Students will access information effectively and efficiently.
 - 3) Students will evaluate and think critically about information.
 - 4) Students will use information effectively for a specific purpose.
 - 5) Students will use information ethically and legally.

 4. **Description of Assessment Methodology / Process** (*e.g. how was assessment administered, how were results interpreted, was a sampling process used.*) *Attach rubric(s) if appropriate. Document all variations used.*
- Since 2002, students in every section of Composition II and Honors Composition II have taken an exit exam near the end of each semester. The exam consists of one hundred multiple choice questions that test students in various skill areas taught in Composition I and Composition II, including rhetorical patterns, research skills, literacy terminology and genres, mechanics, thesis sentences and essay skills, critical interpretation, and research paper skills. The two areas most relevant to information literacy are research skills and research paper skills, and each area includes eleven questions on the exam (for a total of twenty-two questions). These twenty-two questions emphasize skills such as how to find and incorporate sources for a research paper, how to use proper citation, and how to avoid plagiarism.
5. **Assessment Instrument.** *Attach the actual assessment/assignment or provide a description of the assessment/assignment. Document all variations used.*

Information Literacy questions on the Composition II Exit Exam (please note: below are the 22 relevant questions only; the multiple choice answers are not included).

RESEARCH SKILLS

If you are entering some information on the Works Cited page of a research paper, and you are trying to identify a source you tracked down on the Internet, which of the following items would you include?

If you are doing some research in the library, or if you have logged into the library databases from home, and you find an article that looks useful but is not available as "full text," what would you do to try and get a copy of the article?

When you go into the library databases and look at the various alternatives, which option would lead you to the holdings of other libraries in Morris County?

From the following topics, pick the best one for a short paper in English Composition I which would utilize both library type sources (books and periodicals) as well as Internet sources.

When you are considering the usefulness of Internet sources for an academic research paper, which domain name form the following list would be less useful than the others?

When you are looking at a site on the Internet and trying to decide whether to use that site as a source in your research paper, which of the following criteria would be useful in making this decision?

What types of things are usually considered to be "common knowledge," as far as sources are concerned?

When you are undertaking research on an author who is no longer alive, which of the following sources would make a good starting place?

If you were writing a research paper which dealt extensively with the life of a famous author, would you find it necessary or appropriate to consult a literary biography for detailed information on the author's life?

If you were trying to locate a recently published book and it was not in the print collection of the CCM library, what step(s) would you take to obtain the book?

If you were looking for information on an author, which of the following techniques would be most effective for locating high quality information?

RESEARCH PAPER

What is paraphrasing? Define paraphrasing, not in a general sense, but as a technique you would consider using to write a research paper.

If you leave something out of a quotation, what do you use to let the reader know it has been omitted?

In the list of works cited at the end of a research paper, what needs to be included in the entry for each source?

A "Works Cited" page is organized according to what principle?

When you include quotations from a poem, story, or play in an essay, is it necessary to use citations?

When you are writing an essay on a literary work, is it necessary to keep repeating the last name of the author in your citations?

What is plagiarism?

If you are writing a research paper which includes a list of works cited, what would your citations normally include?

Let's say you find a quote in a source that you want to use in an essay or research paper. If you leave a few words out, the meaning of the quote changes significantly. Would this be permissible?

The system of documentation used for academic research papers in English and the other areas of the humanities is called the...

In a college level research paper, secondary sources can be useful and important because...

6. Data Summary for Course

Category	Number of Students Assessed	% of Total Students Assessed in Each Category
Highly Developed Skills	236	30%
Sufficiently Developed Skills	400	50.7%
Insufficiently Developed Skills	152	19.3%
TOTAL	788	100%

7. Conclusions

The Composition II Exit Exam is an excellent tool for measuring information literacy among our students. The data above are from the spring semester of 2015, but the department has numbers going back to 2002, when the exam was first administered. The numbers show a gradual improvement in student scores in information literacy (as well as other skill areas) over the years, revealing the exam has been not only an accurate measurement but also a helpful pedagogical tool. One indication of the test's accuracy is that the spring scores are consistently higher than the fall scores, which is a predictable result of having students who place directly into Composition I in the fall take Composition II in the spring. Students who require remediation in the fall more often take Composition I in the spring and Composition II the next fall. A closer look at student performance on specific questions allows us to see areas of weakness, such as identifying what is considered "common knowledge," and to emphasize these areas in our instruction. The test also shows us what students are doing well on, such as identifying sources found through the internet.

8. Next Steps (e.g. identify any changes to the way information literacy will be taught in the future based on the results or any changes planned for the assessment or assessment methodology)

The data from the exit exam tell us many useful things; however, they are complex and not easy to simplify into the three categories of highly developed, sufficiently developed, and insufficiently

developed. In addition, the exit exam preserves the anonymity of individual students by pooling all of the scores. Going forward, it would be easier to determine the percentage of students who are highly developed, sufficiently developed, and insufficiently developed by tracking individual performances on the test (for example, being able to see the percentage of the twenty-two information literacy questions an individual student gets correct). This would need to be done in a way that still preserves the anonymity of the students.

INFORMATION LITERACY OUTCOMES ASSESSMENT REPORT

INSTRUCTIONS: Complete this form for each course being assessed for the integrated learning goal, Information Literacy. The numerical results for all sections of this course (e.g. ENG 111) need to be aggregated in the data summary section. If there are variations in assessment instrument or methodology by section of this course, all of the various instruments/methodologies should be described in this report. Use as much space as required for each category.

1. **Course** (*e.g. ENG 111 – English Composition I*)

MAT 124 – Statistics

MAT 130 – Probability and Statistics

MAT 183 – Honors Probability and Statistics (not offered in Spring 2015)

2. **Semester**

Spring 2015

3. **Learning Objectives/Outcomes**

- Students will evaluate and think critically about information.
- Students will use information effectively for a specific purpose.

4. **Description of Assessment Methodology / Process** (*e.g. how was assessment administered, how were results interpreted, was a sampling process used.*) *Attach rubric(s) if appropriate. Document all variations used.*

Two multiple choice questions were embedded into the final exams administered to students in MAT 124 and MAT 130. The questions were counted as part of the students' final exam grade. The results of the two questions were tallied and used to measure the students' abilities relative to the learning objectives stated above. The results were categorized as follows.

Correct answers for both questions – Highly Developed Skills

Correct answer for only one question – Sufficiently Developed Skills

Incorrect answers for both questions – Insufficiently Developed Skills

5. **Assessment Instrument.** *Attach the actual assessment/assignment or provide a description of the assessment/assignment. Document all variations used.*

Assessment questions are listed in Attachment I.

6. Data Summary for Course

Category	Number of Students In Each Category	% of Total Students Assessed in Each Category
Highly Developed Skills	55	26%
Sufficiently Developed Skills	108	51%
Insufficiently Developed Skills	50	23%
TOTAL	213	100%

7. Conclusions

The summary results indicate that 77% of the MAT 124/130 students sampled had highly developed or sufficiently developed information literacy skills.

Analysis of Question 1 Results

The student answers to the first question were as follows:

Answer Selected	Percent of Students Selecting this Answer (n=192)
A – Birth weight in 2013 is above the historical average (CORRECT)	36%
B – Birth weight in 2013 is different from the historical average	32%
C – Birth weight in 2013 is equal to the historical average	10%
D – Not enough data to provide a final conclusion	22%

Only 36% of students selected the correct response to this question indicating that more emphasis should be placed on hypothesis testing and the interpretation of p values.

Analysis of Question 2 Results

The student answers to the second question are indicated in the table below.

Answer Selected	Percent of Students Selecting this Answer
A – No outliers; bell shaped; mean is best measure of center	3%
B – Outlier; left skewed; mean is best measure of center	27%
C – Outlier; bell shaped; median is best measure of center	9%
D – Outlier; right skewed; median is best measure of center (CORRECT)	61%

Over 60% of the students selected the correct answer to question 2.

Spring 2015 is the first semester in which information literacy was assessed in the math curriculum. Therefore there is no past data against which to compare this semesters' results.

8. **Next Steps** (*e.g. identify any changes to the way information literacy will be taught in the future based on the results or any changes planned for the assessment or assessment methodology*)

Based on the experience of implementing the Spring 2015 assessment and on the results of the assessment, the following actions are recommended.

1. Since this was the first semester for this assessment, the results and assessment questions should be reviewed early in Fall 2015 semester to determine if any modifications are required to the questions and/or classroom instruction.
2. Develop ways to ensure that all instructors treat the assessment questions as an integral part of the final exam and include the student answers to the assessment questions as part of their exam grade. Although the instructions indicated that the answers to the questions were to be included in the actual grade, one instructor made the following statement in an email containing his/her results: "Most students did not do the survey because they did not have enough time to even finish the exam." Possible modifications for consideration include: 1) rewording the instructions at the beginning of the final exam and 2) fully integrating the assessment questions into the final exam (rather than putting them at the end of the exam with a heading to indicate that they are distinct from the other questions).
3. Consider adding the assessments to all on-line sections of MAT 124 and MAT 130.

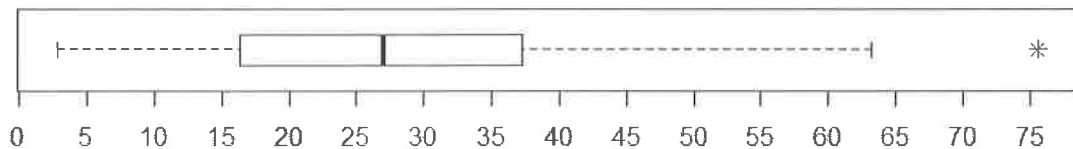
Prepared by: Kathy Shuck
Instructor, Math Department

Attachment I - Assessment Questions

1. Samantha, a nurse in the pediatric unit of a local hospital, wants to conduct a study to determine if the average birth weight of babies in 2013 is above the historic average of birth weights which is 7 lbs in the United States. She has gathered a sample of 1,000 babies and analyzed the data using statistical software. She calculated the p-value to be .0135. At a 5% significance level Samantha can conclude:
 - A. That the average birth weight in 2013 is above the historical average.
 - B. That the average birth weight in 2013 is different from the historical average.
 - C. That the average birth weight in 2013 is equal to the historical average.
 - D. That there is not enough data to provide a final conclusion.

2. The amount of snowfall can be very hard to predict in the Northeast. It is very costly for communities and towns to remove, shovel, plow and salt the roads and walkways. It is also very hard to predict this expense in the yearly budgets. You were hired as a consultant to help formulate the annual budget for snow removal and determine the best measure of center, analyze the below box and whisker plot of the total snow fall in inches for Central Park, New York from 1869 to 2012.

Snowfall in Central Park from 1896 to 2012 in inches



- A. The distribution doesn't have an outlier and is bell shaped. The mean is the best measure of center to use.
- B. The distribution has an outlier and is left skewed. The mean is the best measure of center to use.
- C. The distribution has an outlier and is bell shaped. The median is the best measure of center to use.
- D. The distribution has an outlier and is right skewed. The median is the best measure of center to use.

INFORMATION LITERACY OUTCOMES ASSESSMENT REPORT

INSTRUCTIONS: Complete this form for each course being assessed for the integrated learning goal, Information Literacy. The numerical results for all sections of this course (e.g. ENG 111) need to be aggregated in the data summary section. If there are variations in assessment instrument or methodology by section of this course, all of the various instruments/methodologies should be described in this report. Use as much space as required for each category.

1. **Course:** Concepts in Biology (BIO – 132), Human Biology (BIO – 133) and General Biology II (BIO – 122)
2. **Semester:** Fall 2014 – Spring 2015
3. **Learning Objectives/Outcomes:** Address an information need by locating, evaluating and effectively using scientific sources.
4. **Description of Assessment Methodology/Process:**

In Concepts in Biology and Human Biology, students had to pick approved topics related to the course. For example, in one section of Human Biology, research papers were assigned on homeostatic imbalances in one of the body systems discussed in the course. Students in Human Biology and Concepts in Biology submitted the research papers in either the lecture (Human Biology) or the laboratory component (Concepts in Biology) of the course. Both of these courses are taken by non-biology and non-chemistry majors. Students in these courses receive a library orientation given by one of the library staff. In General Biology II, students submitted two laboratory reports in the laboratory component of the course and **one** of these laboratory reports was assessed. This course is a second semester sequence for biology and chemistry majors. Students in General Biology II do not attend a library orientation, however students should have written two laboratory reports in General Biology I. In all three courses, the research papers or laboratory reports were assessed using the **same** information literacy rubric that was developed by the faculty teaching these courses. Faculty teaching these courses then submitted a completed, electronic Excel spreadsheet for each student and the data was then assessed for each course and then combined to assess all three courses.

5. **Assessment Instrument:** Each student in General Biology II, Concepts in Biology and Human Biology were all assessed using the rubric below.

	Excellent	Very Good	Good	Fair	Unsatisfactory
	10	8	5	2	0
Identify Information Needed	All of the sources are related to the topic/thesis statement and all of the sources are distinguished and trustworthy	Most of the sources are related to the topic/thesis statement and a majority of the sources are distinguished and trustworthy	Half of the sources cited are related to the topic/thesis statement and some of the sources are distinguished and trustworthy	Few of the sources cited are related to the topic/thesis statement and a few of the sources are distinguished and trustworthy	None of the sources are related to the topic/thesis statement and none of the sources are distinguished and trustworthy
Use the Information Effectively and Efficiently	All of the sources are critically evaluated and summarized and support the thesis statement	Most of the sources are critically evaluated and summarized and support the thesis statement	Half of the sources are critically evaluated and summarized and support the thesis statement	Few of the sources are critically evaluated and summarized and support the thesis statement	None of the sources are critically evaluated and summarized and support the thesis statement
Properly Cite the Information	All of the sources are correctly cited in the body of the research paper and the bibliography/works cited section	Most of the sources are correctly cited in the body of the research paper and the bibliography/works cited section	Half of the sources are correctly cited in the body of the research paper and the bibliography/works cited section	Few of the sources are correctly cited in the body of the research paper and the bibliography/works cited section	None of the sources are correctly cited in the body of the research paper and the bibliography/works cited section

6. Data Summary for Courses

Concepts in Biology

a. Identify Information Needed

Category	Number of Students Assessed	% Of Total Students Assessed In Each Category
Highly Developed Skills	124	73.8%
Sufficiently Developed Skills	34	20.2%
Insufficiently Developed Skills	10	6.0%
TOTAL	168	100.0%

b. Use Information Effectively and Efficiently

Category	Number of Students Assessed	% Of Total Students Assessed In Each Category
Highly Developed Skills	108	64.3%
Sufficiently Developed Skills	45	26.8%
Insufficiently Developed Skills	15	8.9%
TOTAL	168	100.0%

c. Properly Cite the Information

Category	Number of Students Assessed	% Of Total Students Assessed In Each Category
Highly Developed Skills	88	52.4%
Sufficiently Developed Skills	44	26.2%
Insufficiently Developed Skills	36	21.4%
TOTAL	168	100.0%

Human Biology

a. Identify Information Needed

Category	Number of Students Assessed	% Of Total Students Assessed In Each Category
Highly Developed Skills	96	75.6%
Sufficiently Developed Skills	21	16.5%
Insufficiently Developed Skills	10	7.9%
TOTAL	127	100.0%

b. Use Information Effectively and Efficiently

Category	Number of Students Assessed	% Of Total Students Assessed In Each Category
Highly Developed Skills	72	56.7%
Sufficiently Developed Skills	33	26.0%
Insufficiently Developed Skills	22	17.3%
TOTAL	127	100.0%

c. Properly Cite the Information

Category	Number of Students Assessed	% Of Total Students Assessed In Each Category
Highly Developed Skills	65	51.2%
Sufficiently Developed Skills	37	29.1%
Insufficiently Developed Skills	25	19.7%
TOTAL	127	100.0%

General Biology II

a. Identify Information Needed

Category	Number of Students Assessed	% Of Total Students Assessed In Each Category
Highly Developed Skills	81	92.0%
Sufficiently Developed Skills	7	8.0%
Insufficiently Developed Skills	0	0.0%
TOTAL	88	100.0%

b. Use Information Effectively and Efficiently

Category	Number of Students Assessed	% Of Total Students Assessed In Each Category
Highly Developed Skills	76	86.4%
Sufficiently Developed Skills	10	11.4%
Insufficiently Developed Skills	2	2.3%
TOTAL	88	100.0%

c. Properly Cite the Information

Category	Number of Students Assessed	% Of Total Students Assessed In Each Category
Highly Developed Skills	42	47.7%
Sufficiently Developed Skills	27	30.7%
Insufficiently Developed Skills	19	21.6%
TOTAL	88	100.0%

Human Biology, Concepts in Biology and General Biology II

a. Identify Information Needed

Category	Number of Students Assessed	% Of Total Students Assessed In Each Category
Highly Developed Skills	301	79.6%
Sufficiently Developed Skills	62	16.2%
Insufficiently Developed Skills	20	5.2%
TOTAL	383	100.0%

b. Use Information Effectively and Efficiently

Category	Number of Students Assessed	% Of Total Students Assessed In Each Category
Highly Developed Skills	256	66.8%
Sufficiently Developed Skills	88	23.0%
Insufficiently Developed Skills	39	10.2%
TOTAL	383	100.0%

c. Properly Cite the Information

Category	Number of Students Assessed	% Of Total Students Assessed In Each Category
Highly Developed Skills	195	50.9%
Sufficiently Developed Skills	108	28.2%
Insufficiently Developed Skills	80	20.9%
TOTAL	383	100.0%

7. Conclusions

Students from General Biology II (n = 88), Human Biology (n = 127) and Concepts in Biology (n = 168) were asked to write research papers or laboratory reports and then the students were evaluated using the rubric above. The rubric addressed whether or not the students could identify an information need, use information effectively and efficiently and if they could properly cite the information they found. The results from Concepts in Biology and Human Biology were similar in percentages in all three of the categories, identify an information need, the use of information effectively and efficiently and properly citing information. General Biology II also had similar results in the category of properly citing information. However, students in General Biology II were better at identifying an information need and the use of information effectively and efficiently. These differences can be attributed to the fact that General Biology II students have had practice writing laboratory reports (2) in General Biology I and in General Biology II.

Overall, students in General Biology II, Concepts in Biology and Human Biology (n = 383) have highly developed skills in identifying an information need (79.6%) and using information effectively and efficiently (66.8%). In evaluating the category of properly citing information,

students have a more difficult time mastering this skill (50.9% have highly developed skills, 28.2% have sufficiently developed skills and 20.9% have insufficiently developed skills).

8. Next Steps:

For the fall 2015 – spring 2016 semester, in Concepts in Biology, Human Biology and General Biology II, the type of assessment and the rubric used will stay the same. In all three courses, we would like to improve the categories of citing properly. To improve the category of proper citations, faculty can stress the importance of this aspect within a paper and can provide additional resources, such as www.easybib.com, which is a free bibliography generator or <http://library.acadiau.ca/tutorials/plagiarism/>, which is short interactive tutorial on plagiarism from Acadia University. Faculty can also ask the library staff to address this issue during library visits for Human Biology and Concepts in Biology.

INFORMATION LITERACY OUTCOMES ASSESSMENT REPORT

INSTRUCTIONS: Complete this form for each course being assessed for the integrated learning goal, Information Literacy. The numerical results for all sections of this course (e.g. ENG 111) need to be aggregated in the data summary section. If there are variations in assessment instrument or methodology by section of this course, all of the various instruments/methodologies should be described in this report. Use as much space as required for each category.

1. **Course** *CMP 126 Computer Technology and Applications*

2. **Semester** *Spring 2015*

3. Learning Objectives/Outcomes

Upon completion of this course, the student will be able to demonstrate:

- Comfortable, competent use of a computer for processing documents, preparing spreadsheets, using databases, calendaring information, and developing presentations through successful completion of assignments, projects, and examinations
- Effective utilization of the internet and World Wide Web for gathering and analyzing information through successful completion of assignments, projects, and examinations
- An understanding of the basic workings of the computer and the role of the computer in society through successful completion of assignments, projects, and examinations
- Critical thinking and decision-making skill in completing assignments and projects and in meeting deadlines through successful completion of assignments, projects, and examinations
- The development of a job-search strategy and preparation of related job-search documents

4. **Description of Assessment Methodology / Process** (*e.g. how was assessment administered, how were results interpreted, was a sampling process used.*) *Attach rubric(s) if appropriate. Document all variations used.*

Information Literacy assessment was completed as part of year-end outcome assessment for this general education course. One multiple-choice question was included in the overall assessment.

5. **Assessment Instrument.** *Attach the actual assessment/assignment or provide a description of the assessment/assignment. Document all variations used.*

Which of the following questions does **not** address the credibility of a website?

- a. In what position in the search results list of a search engine query did the website appear?
- b. Are the website pages up-to-date?
- c. Is the website's sponsoring organization or author a noted authority?
- d. Does the website have a contact email, address and/or phone number listed?

6. Data Summary for Course

Category	Number of Students Assessed	% of Total Students Assessed in Each Category
Highly Developed Skills	48	70%
Sufficiently Developed Skills		
Insufficiently Developed Skills	21	30%
TOTAL	69	

7. Conclusions

We are pleased with the initial results of this assessment with 70% of students meeting the goal of highly sufficient developed skills in information literacy. The question had only one correct answer so there were not three categories of assessment scores to be applied, only two – highly developed or insufficiently developed.

8. Next Steps *(e.g. identify any changes to the way information literacy will be taught in the future based on the results or any changes planned for the assessment or assessment methodology)*

We plan on utilizing the same assessment tool and applying the same assessment methodology for next year. This was a new assessment for a course which is being taught by entirely new faculty. We expect to see improvement in completion and success rates as faculty continue to improve their delivery of this course. In order to improve results and participation, the assessment will be made available at the beginning of the semester to faculty. In addition, all learning outcomes, including the one applicable to this information literacy, will be emphasized to faculty prior to the start of the semester.

INFORMATION LITERACY OUTCOMES ASSESSMENT REPORT

INSTRUCTIONS: Complete this form for each course being assessed for the integrated learning goal, Information Literacy. The numerical results for all sections of this course (e.g. ENG 111) need to be aggregated in the data summary section. If there are variations in assessment instrument or methodology by section of this course, all of the various instruments/methodologies should be described in this report. Use as much space as required for each category.

1. **Course** (e.g. ENG 111 – English Composition I)

- PSY 113 General Psychology

2. **Semester**

- Spring Semester 2015

3. **Learning Objectives/Outcomes**

Upon successful completion of the course, the student should be able to:

- Understand psychology as a science and a profession
- Appreciate the history of psychology
- Grasp the scope of various disciplines within psychology
- Be able to identify significant contributors and their ideas
- Prepare students for future psychology courses
- Identify and explain the methods of analysis used to examine human behavior
- Understand the ethical implications of issues and situations involved in the study of psychology
- Locate, evaluate and think critically about the information collected in the study of psychology

4. **Description of Assessment Methodology / Process** (e.g. how was assessment administered, how were results interpreted, was a sampling process used.) Attach rubric(s) if appropriate. Document all variations used.

- The students visit the Learning Center for instructions in addition to classroom lectures on assessing literature for research.
- **Please see the attached Grading Rubric used in General Psychology and General Psychology Honors for the Annotated Bibliography.**
- In the General Psychology Honors, the students are required to write a Research Paper in the American Psychological Association (APA) format in addition to presenting a Power Point presentation summarizing their data.

5. **Assessment Instrument.** *Attach the actual assessment/assignment or provide a description of the assessment/assignment. Document all variations used.*

- During the fall, spring, and summer semesters, the students are introduced to *Research Methods* in Psychology.
- The students are challenged to compare and contrast the various styles of literature to meet the learning objective: *Locate, evaluate and think critically about the information collected in the study of psychology.*
- Therefore the students must complete two Annotated Bibliographies using the *Archival Method—Reviewing the Literature*. The information cannot be older than 5 years old, unless the older information is relevant to the intended topic.
- The Bibliography must be completed in the American Psychological Association (APA) format.

The Annotated Bibliography is divided into two sections:

Annotated Bibliography I

In the first section the students used the archival method to review *secondary literature* to answer the intended research question. In this section the data included, and not limited to, the following: newspaper articles, magazine articles, blogs, edited books, and governmental reports. The students used at least two online sources and cited them according to the APA guidelines.

Annotated Bibliography II

In the second section the students reviewed *primary literature* from academic journals to answer the intended research question. In this section the data also included, academic articles from books.

Following the literature review, students summarized their research and provided oral reports citing all relevant material. In some situations, the students were permitted to present via PowerPoint.

In order to complete the assignment successfully, the student used the stated requirements as a guide.

- a. Identify the author and background to provide authority
- b. Identify the intended audience; if it is an academic source identify the participants in the study
- c. Compare or contrast the collected data with other cited literature
- d. Explain how the literature reviewed illuminates the intended topic.

Requirements paraphrased from: <http://guides.library.cornell.edu/annotatedbibliography>

6. Data Summary for Course

Category	Number of Students Assessed	% of Total Students Assessed in Each Category
Highly Developed Skills	22	47%
Sufficiently Developed Skills	23	49%
Insufficiently Developed Skills	2	4%
TOTAL	47	100

7. Conclusions

The data summary is based upon the Grading Rubric used in the class to assess the students' performance.

Forty-seven students were assessed during the spring 2015 semester.

The following data identifies the earned grades reflecting the stated categories above.

Students who earned the grades:

"A" / "B+" demonstrated Highly Developed Skills

"B" / "C" demonstrated Sufficiently Developed Skills

"D" / "F" demonstrated Insufficiently Developed Skills

8. Next Steps (e.g. identify any changes to the way information literacy will be taught in the future based on the results or any changes planned for the assessment or assessment methodology)

The Annotated Bibliography assignment will be modified to meet the American Psychological Association Learning Goal 2 for the undergraduate psychology major.

The goals are:

- 2.1 Use scientific reasoning to interpret psychological phenomena
- 2.2 Demonstrate psychology information literacy
- 2.3 Engage in innovative and integrative thinking and problem solving
- 2.4 Interpret, design and conduct psychological research [Honors]
- 2.5 Incorporate sociocultural factors in scientific inquiry

A greater emphasis will be placed on examining empirical evidence and analyzing psychological assumptions. In order to accomplish this particular objective, I will add critical thinking questions to existing instructions for the students in **PSY 113** and PSY 180

9. Future Plans

A version of the assignment will be included in all General Psychology classes taught by full-time faculty in the 2015/2016 semesters.

Annotated Bibliography Grading Rubric

	A	B	C	D	F
Content	The sources are related to your topic and answer the research question.	The sources are related and are clearly related to your topic; however, did not clearly answer the research question	The sources are general and do not provide a strong answer to the research question	The sources cited for the Annotated Bibliography are incorrect—secondary/primary.	See the Professor
Relative Importance to Subject	The varieties of secondary/primary sources are all written at the appropriate level for the assignment. The annotations indicate a clear understanding of the literature reviewed	The varieties of sources [secondary/primary] are written at the appropriate level for the assignment. However, some sources are weak in addressing the topic	The secondary and primary sources do not provide strong insight. The connection between the sources and your topic is not clear.	The sources used do not answer the research question.	See the Professor
Annotation: Includes all 4 points as stated on the bottom of page	The annotation follows the 4 points and provides the main conclusion of each source.	The annotations summarize the main conclusion of each of the sources and include most of 4 points.	The annotations provide a general summary; however, do not reflect the main 4 points	The annotations do not follow the provided guidelines; therefore, it is hard discern if the question was answered.	See the Professor
APA Style	You correctly cited the 4 sources using the APA style as described in class, and the Cornell link.	You correctly cited at 4 sources using the APA style as described in class; however, there are minor problems with formatting.	You cited the 4 sources; however, you need to review the guidelines for citing in the APA style.	You cited the 4 sources incorrectly, the APA style was not used and the annotation is poorly written—spelling, grammar, and unclear of the connection to the topic.	See the Professor
TOTAL= 100					

Key Points:

- What is the topic?
- What is the question?
- What is the hypothesis?
- Did you answer the question?
- Summarize your results!

The annotations will:

- (a) Identify the author and background to provide authority
- (b) Identify the intended audience; if it is an academic source identify the participants in the study
- (c) Compare or contrast this work with other cited works
- (d) Explain how this work illuminates your bibliography topic.

INFORMATION LITERACY OUTCOMES ASSESSMENT REPORT

INSTRUCTIONS: Complete this form for each course being assessed for the integrated learning goal, Information Literacy. The numerical results for all sections of this course (e.g. ENG 111) need to be aggregated in the data summary section. If there are variations in assessment instrument or methodology by section of this course, all of the various instruments/methodologies should be described in this report. Use as much space as required for each category.

1. Course (*e.g. ENG 111 – English Composition I*)

ART 133 Art History I; ART 134 Art History II

2. Semester

Benchmark Spring 2015. First implementation Fall 2015

3. Learning Objectives/Outcomes

I Identify nature and extent of information needed to satisfy question or hypothesis

Identify points and availability of information resources

Identify context or type of information required to address question or hypothesis

Critical evaluation of information resources: historical context, point-of-view or bias

Employment and usage of the researched information (Fair use, need for acknowledgment, citation etc. – overlaps with Ethical Reasoning).

4. Description of Assessment Methodology / Process (*e.g. how was assessment administered, how were results interpreted, was a sampling process used.*) *Attach rubric(s) if appropriate. Document all variations used.*

Incorporation of exam questions on the topic

Assignment of a research paper on the topic (Fall 2015)

Assign instructional session in Library on information literacy (Fall 2015)

Questionnaire on topic of Library instructional session (Fall 2015)

5. Assessment Instrument. *Attach the actual assessment/assignment or provide a description of the assessment/assignment. Document all variations used.*

See attached

6. Data Summary for Course

Category	Number of Students Assessed	% of Total Students Assessed in Each Category
Highly Developed Skills	28	27%
Sufficiently Developed Skills	32	31%
Insufficiently Developed Skills	44	42%

TOTAL	104	
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7. Conclusions

None as yet

8. Next Steps (*e.g. identify any changes to the way information literacy will be taught in the future based on the results or any changes planned for the assessment or assessment methodology*)

This is an initial attempt at developing the assessment method for this course. Gathering initial data in an early adaptation will serve as a benchmark and provide feedback for development.

Information Literacy

Art History I ART 133 and Art History II ART 134

Outcome Goals:

- Identify nature and extent of information needed to satisfy question or hypothesis
- Identify points and availability of information resources
- Identify context or type of information required to address question or hypothesis
- Critical evaluation of information resources: historical context, point-of-view or bias
- Employment and usage of the researched information (Fair use, need for acknowledgment, citation etc. – overlaps with Ethical Reasoning).

Based on the information given, please provide your best answer to the questions that follow:

This paragraph is quoted exactly from Wikipedia.

Michelangelo di Lodovico Buonarroti Simoni (6 March 1475 – 18 February 1564), commonly known as Michelangelo (Italian pronunciation: [mike'landzelo]), was an Italian sculptor, painter, architect, poet, and engineer of the High Renaissance who exerted an unparalleled influence on the development of Western art. Considered the greatest living artist in his lifetime, he has since been held as one of the greatest artists of all time. Despite making few forays beyond the arts, his versatility in the disciplines he took up was of such a high order that he is often considered a contender for the title of the archetypal Renaissance man, along with his fellow Italian Leonardo da Vinci.

1) A student wishes to write the following in their research paper:

Michelangelo di Lodovico Buonarroti Simoni (6 March 1475 – 18 February 1564), commonly known as Michelangelo (Italian pronunciation: [mike'landzelo]), was an Italian sculptor, painter, architect, poet, and engineer of the High Renaissance.

- a) This text is “Fair Use” and an allowed usage of research
- b) This text is a direct quote and should be cited (quoted and the source indicated)
- c) This text is common knowledge to all and does not need quotes or a citation
- d) This text is a paraphrase (only similar to the source) and does not need quotes or a citation

2) A student wishes to write the following in their research paper:

Michelangelo Buonarroti was an Italian Artist of the High Renaissance who exerted an unparalleled influence on Western Art. His versatility in the disciplines was so high that he was considered an archetypal Renaissance man along with Leonardo Da Vinci.

- a) This text is “Fair Use” and an allowed usage of research
- b) Although this text is a paraphrase, it still needs a citation
- c) This text is common knowledge to all and does not need quotes or a citation
- d) This text is a paraphrase (only similar to the source) and does not need quotes or a citation

3) A student wishes to engage the proposition “Michelangelo Buonarroti was a great leader of the Italian Renaissance and considered by many a Renaissance Man. What qualities, works and values make him a contender for such a title?” The student has looked at Wikipedia to answer this question in their research paper. What is the best answer from the following:

- a) The student has done enough research by consulting Wikipedia and can confidently answer this question with this source alone
- b) The student can freely paraphrase this one source for their research paper for content and without citation
- c) The student needs to research several other resources and provide citations
- d) Paraphrasing one other source without citation is enough to complete this research paper

4) A student might question the "Great Man" (Renaissance Man or "Master of All Trades") hypothesis or premise- it is valorizing (makes a cultural hero out of someone at the expense of others). What about "Great Women?" Or great figures from other regions or cultures? What makes Michelangelo so great?

- a) Wikipedia is the ultimate authority on this subject- Michelangelo was truly a "Great Renaissance Man"
- b) The idea that Michelangelo is a "great genius" is an Italian and Florentine myth
- c) Northern Renaissance and Gothic artists were his equal
- d) Women artists were his equal
- e) More research is needed beyond Wikipedia to establish his relative status as "Great "

Draft of Scoring Rubric for Information Literacy in Art History

The scoring rubric is at a rudimentary stage. One descriptive paragraph is provided to the student. Four questions are posed, with four multiple choice responses provided for each question. The answers have a correct response. The questions themselves proceed from more basic to more sophisticated.

In scoring, correct answers to first two questions were scored as SD; a wrong answer was scored ID. Correct answers to the second two questions (3 and 4) were scored as HD; again a wrong answer here was scored ID.

Note that a scoring of 2 HD and 2 SD represents 100% correct answers to all of the questions and a rating of HD. The next scoring gives a result of 3 correct answers and one wrong yielding a rating of SD. Two or more wrong answers results in the rating of ID.

This may produce fairly rough results but should suffice for a benchmark. It may be useful to consider giving a numerical point value to each of the multiple choice answers reflecting an increasing range of sophistication and weighting the questions accordingly. As a result, it may be necessary to develop additional categories of resulting scores than the three listed here.

Highly Developed	Sufficiently Developed	Insufficiently Developed	OVERALL RATING
2	2		HD
1	2	1	SD
	2	2	ID
	1	3	ID
		4	ID

APPENDIX B
Information Literacy Results for Fall 2015 - Spring 2015 Semesters

Course	Primary GenEd Category	Secondary GenEd Category	Semesters Administered	Highly Developed Skills	Sufficiently Developed Skills	Insufficiently Developed Skills	Total Number of Students
COM 109	Communications		Spr15	70	116	117	303
ENG 112/132	Communications		Spr15	236	400	152	788
MAT 124/130	Mathematics		Spr15	55	108	50	213
BIO 122	Science		F14, Spr15	66	15	7	88
BIO 132	Science		F14, Spr15	107	41	20	168
BIO 133	Science		F14, Spr15	78	30	19	127
CMP 126	Technology		Spr15	48	0	21	69
PSY 113	Social Science		Spr15	22	23	2	47
ART 133/134	Diversity	Humanities	Spr15	28	32	42	102
TOTAL				710	765	430	1905
Percentage				37.3%	40.2%	22.6%	100.0%