Since it’s revision in 2015, the SC4 reference staff has incorporated the Association of College and Research Libraries Framework for Information Literacy for Higher Education (www.al.org/acrl/standards/ilframework) concepts into the SC4 Library information literacy program to maximize student success. Using the Framework as a guideline, the librarians at SC4 adopted the following IL outcome for the ENG 101 information literacy program:

Students will be able to find and critically evaluate sources for relevance and accuracy and use them ethically.

Shown on the following pages is a reflective evaluation of the 2018-2019 SC4 library information literacy program. Also included are statistics and the scoring distribution of participating students in the English 101 information literacy (IL) program for this past academic year.

The statistics show the number of ENG 101 information literacy classes remained the same as the previous year, but the number of online sessions increased from nine to 14. Also, the number of non-ENG 101 IL sessions increased; The total number of students attending an IL session this past academic year (1,564) increased over the previous year (1,523) despite a drop in enrollment.

During the IL classes, the reference librarians conducted pre- and post-IL class quizzes using individual response devices, or clickers. The results demonstrate that after attending the IL class, students were better able to critically and effectively evaluate sources for relevance and usefulness and use them ethically. Students also improved the following skills:

- Recognizing the need to evaluate all sources critically;
- Identifying characteristics of a scholarly journal versus a general magazine;
- Using Boolean operators and other techniques to refine their searches; and
- Recognizing the need to cite direct quotes and paraphrased material.
- Identifying the elements of the citation.

Action plans for 2019-2020 Information Literacy Program to improve student success:

- Continue to incorporate concepts of the ACRL Framework into the ENG 102 and discipline specific IL classes. Understanding the concepts may help students think more critically about the sources they are using.
- Continue to work with faculty to help incorporate IL Gen. Ed. Competency Outcomes into curriculum.
- Increase participation in ENG 101 IL attendance.
- Revise LibWizard online ENG 101 IL program.
- Strive to meet the proficiencies proposed by the ACRL Standards for Proficiencies for Assessment Librarians and Coordinators (www.ala.org/acrl/standards/assessment_proficiencies).

The table below breaks down the 87 IL classes conducted by SC4 reference librarians by discipline from May 7, 2018, through May 3, 2019. The reference librarians also answered over 1,300 questions at the reference desk and over 200 24/7 virtual reference chats.

### Library Information Literacy Program Statistics
**May 7, 2018 – May 3, 2019**
Sessions conducted by reference staff

<table>
<thead>
<tr>
<th>Class</th>
<th>Number of IL classes</th>
<th>Number of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 101 face-to-face sessions</td>
<td>23 (28 in 17-18)</td>
<td>280 completed library worksheets</td>
</tr>
<tr>
<td>Online English 101</td>
<td>14 (9 in 17-18)</td>
<td>248 complete library assignments</td>
</tr>
</tbody>
</table>

- **Total number of ENG101 classes & number of students who completed the assignment**
  - 37 ENG 101 IL classes
  - 528 completed library worksheets

<table>
<thead>
<tr>
<th>Class</th>
<th>Number</th>
<th>Total number of ENG101 classes &amp; students</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO</td>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td>Criminal Justice</td>
<td>4</td>
<td>90</td>
</tr>
<tr>
<td>English 102 face-to-face sessions</td>
<td>15</td>
<td>360</td>
</tr>
<tr>
<td>English 102 online</td>
<td>2</td>
<td>40</td>
</tr>
<tr>
<td>Other English classes</td>
<td>4</td>
<td>70</td>
</tr>
<tr>
<td>Geology</td>
<td>4</td>
<td>80</td>
</tr>
<tr>
<td>HIT</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Medical Assisting</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>Nursing</td>
<td>7</td>
<td>168</td>
</tr>
<tr>
<td>Political Science</td>
<td>1</td>
<td>30</td>
</tr>
<tr>
<td>Student Development</td>
<td>4</td>
<td>60</td>
</tr>
</tbody>
</table>

- **Total number of non-ENG101 IL classes & students**
  - 50
  - 1,048

- **Grand Total**
  - 87 (84 in 17-19)
  - 1,564 (1,523 in 17-18)

| Questions answered by reference librarians at the reference desk May 7, 2018 – May 3, 2019 | 1,359 (1,392 in 17-18) |
| 24/7 chat questions answered by SC4 librarians | 213 24/7 chats |
2018 – 2019 Summer, Fall, & Winter

English 101 Library Information Literacy Program Statistics (Excludes make-up scores)

| ASSIGNMENT SHEETS COMPLETED | 528 COMPLETED WRITTEN & ONLINE |

SCORING DISTRIBUTION
(Percent figures have been rounded off and are based on the number of completed assignment sheets.)

<table>
<thead>
<tr>
<th>Score Range</th>
<th>2018-2019</th>
<th>2017-2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>90 – 100 %</td>
<td>416 (79%)</td>
<td>361 (71%)</td>
</tr>
<tr>
<td>80 – 89%</td>
<td>76 (14%)</td>
<td>107 (21%)</td>
</tr>
<tr>
<td>70 – 79%</td>
<td>19 (4%)</td>
<td>30 (6%)</td>
</tr>
<tr>
<td>69% &amp; BELOW</td>
<td>511 (97%)</td>
<td>504 (99%)</td>
</tr>
<tr>
<td></td>
<td>17 (3%)</td>
<td>7 (1%)</td>
</tr>
</tbody>
</table>

Comparative Results - ENG 101 Information Literacy 2018-2019
Classes conducted by Jane Lewandoski – Fall & Winter Combined

Evaluating two articles

Both face-to-face (f2f) and online students are required to complete questions evaluating two given sources. Face-to-face students were directed to a library website which linked to two, and answer the following questions.

7. Of the two listed below, which one(s) is more trustworthy? (Circle the letter of the source.) (3 points)

8. Why did you think your selection for question #7 was more trustworthy? (3 points)
   a. Was one article biased in any way? __________________________________________________________________________
   b. What authority or background do the authors have? ______________________________________________________________________
   c. Would you use the other source(s) in a different way / for a different purpose? ____________________________________________________________________
Students in the online ENG 101 classes were asked to compare the same two linked sources and answer the following questions.

Consider your answer with the following questions.

- Why did you think your selection(s) were more authoritative?
- Was one article biased in any way?
- What about the authors?
- Would you use the other source(s) in a different way / for a different purpose?

Although both articles point to human involvement in contributing to climate change, the NASA article “Climate Change: How Do We Know? Facts” provides scientific evidence of all of the causes of climate change. After attending the IL class, the majority of students chose the NASA article as the more authoritative source.

Most students were able to recognize the NASA website as being more authoritative as shown below.

- I chose Climate Change: How Do We Know? Facts because it is written by NASA which is a very reliable source. NASA is a well-known organization that can be well trusted. This article seems to have a lot of scientific evidence to support what it is saying. I would not use the second source in any way. I do not see an author listed on the main page and at the bottom it seems like many different people just submitting their own views. The topic is under the section spirituality>personal growth which doesn't seem very factual or based on any evidence.
- The author is NASA and so their evidence it factual and researched whereas the other article can be researched it will also have more opinions. NASA is a federally funded organization whereas the other is not.
- This article has more facts and evidence than giving causes as in the other article. Yes, the other article could be more used for Cause and solution to climate change research.
- Provides all citation information and has a credible author (NASA). I would use the other source to gain insight and ideas, however not to get factual information and quote it.

On the other hand, there were still some answers such as the following which indicates helping students learn how to evaluate sources is an ongoing process.

- I chose the first source as being more authoritative because it presented more facts, more reasoning, and is written by science editors for Nasa. I would still incorporate the other source because in high school my English teachers always wanted us to use as many sources as possible to make our writing as plausible as possible.
- It makes a statement as a title instead of a question mark
More on Evaluating Sources of Information
Classes conducted by Jane Lewandoski – Fall & Winter Combined

Determining Bias
During the on campus information literacy class, students are asked which of the following statements seems more authoritative. Most students correctly choose the one citing the *Lancet Psychiatry*, a British medical journal (see chart below).

![Table of Responses]

<table>
<thead>
<tr>
<th>Statement</th>
<th>Percent</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>People who participate in yoga have a 22.9% reduction in poor mental health days.</td>
<td>6.58%</td>
<td>11</td>
</tr>
<tr>
<td>According to the Wall Street Journal, people who participate in yoga have a 22.9% reduction in poor mental health days.</td>
<td>22.34%</td>
<td>44</td>
</tr>
<tr>
<td>According to Lancet Psychiatry, people who participate in yoga have a 22.9% reduction in poor mental health days.</td>
<td>72.08%</td>
<td>142</td>
</tr>
</tbody>
</table>

After asking the question, a discussion of what makes the third choice sound more trustworthy followed in class, and how students could find the primary source of information for the newspaper article.
Identifying Potentially Biased Sources

Only 58% of ENG 101 students felt the need to evaluate materials from all content sources before the ENG 101 IL class. After the class, 97% correctly recognized the need to evaluate all sources regardless of where they were found.

Information from which of the following sources *might* be biased?

1. *The Detroit News*
2. *Wikipedia*
3. Library database
4. Published book
5. All of the above

<table>
<thead>
<tr>
<th>Sources</th>
<th>Percent Before IL Class</th>
<th>Count Before IL Class</th>
<th>Percent After IL Class</th>
<th>Count After IL Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Detroit News</td>
<td>13.00%</td>
<td>26</td>
<td>0.00%</td>
<td>0</td>
</tr>
<tr>
<td>Wikipedia</td>
<td>26.00%</td>
<td>52</td>
<td>1.34%</td>
<td>3</td>
</tr>
<tr>
<td>Library database</td>
<td>0.50%</td>
<td>1</td>
<td>0.00%</td>
<td>0</td>
</tr>
<tr>
<td>Published book</td>
<td>3.00%</td>
<td>6</td>
<td>1.34%</td>
<td>3</td>
</tr>
<tr>
<td>All of the above (c)</td>
<td>57.50%</td>
<td>115</td>
<td>97.32%</td>
<td>218</td>
</tr>
</tbody>
</table>

Totals

100% 200 100% 224
Recognizing Importance of Peer Reviewed Sources

Less than half of ENG 101 students recognized the importance of peer reviewed sources before attending an ENG 101 IL class. After the class, over 90% understood the importance of peer reviewed journals for research papers after the IL class as shown below.

Articles from PEER REVIEWED JOURNALS are good sources of information for research papers.

1. True
2. False

<table>
<thead>
<tr>
<th>Responses</th>
<th>Percent</th>
<th>Count</th>
<th>Percent</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before IL Class</td>
<td>True</td>
<td>38.10%</td>
<td>72</td>
<td>91.59%</td>
</tr>
<tr>
<td></td>
<td>False</td>
<td>61.90%</td>
<td>117</td>
<td>8.41%</td>
</tr>
<tr>
<td>Totals</td>
<td>100%</td>
<td>189</td>
<td>100%</td>
<td>214</td>
</tr>
</tbody>
</table>

Bar chart showing the percentage increase in understanding the importance of peer reviewed journals before and after the IL class.
Using Boolean Operators

Slightly over half the students were aware of Boolean operators before the IL class. After, over 90% of students understood the meaning of the AND Boolean operator.

Which Boolean operator narrows your search results?

1. OR
2. AND
3. I don’t know

<table>
<thead>
<tr>
<th>Responses</th>
<th>Percent</th>
<th>Count</th>
<th>Percent</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before IL Class</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OR</td>
<td>36.32%</td>
<td>77</td>
<td>2.30%</td>
<td>5</td>
</tr>
<tr>
<td>AND (c)</td>
<td>57.55%</td>
<td>122</td>
<td>94.01%</td>
<td>204</td>
</tr>
<tr>
<td>I don’t know</td>
<td>6.13%</td>
<td>13</td>
<td>3.68%</td>
<td>8</td>
</tr>
<tr>
<td>Totals</td>
<td>100%</td>
<td>212</td>
<td>100%</td>
<td>217</td>
</tr>
</tbody>
</table>
Citing Paraphrased Material

More students understood the importance of citing paraphrased sources after the IL class.

If you use a passage of original material from an article and put it in your own words, you have to cite it.

1. True
2. False

<table>
<thead>
<tr>
<th></th>
<th>Before IL Class</th>
<th>After IL Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>True</td>
<td>76.50%</td>
<td>91.59%</td>
</tr>
<tr>
<td></td>
<td>153</td>
<td>196</td>
</tr>
<tr>
<td>False</td>
<td>23.50%</td>
<td>4.41%</td>
</tr>
<tr>
<td></td>
<td>47</td>
<td>18</td>
</tr>
<tr>
<td>Totals</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>200</td>
<td>214</td>
</tr>
</tbody>
</table>
Identifying Elements of a MLA 8th Edition Citation

Most students were not able to identify the title of the journal from an MLA 8th edition citation before the IL class: After IL class, over 85% of the students were able to identify the title of the journal.


What is the title of the journal?

1. “Design Mining…”
2. ACM Digital Library
3. Evolutionary Computation
4. I don’t know

<table>
<thead>
<tr>
<th></th>
<th>Percent</th>
<th>Count</th>
<th>Percent</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before IL Class</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Design Mining…”</td>
<td>49.47%</td>
<td>94</td>
<td>3.33%</td>
<td>7</td>
</tr>
<tr>
<td>ACM Digital Library</td>
<td>3.68%</td>
<td>7</td>
<td>2.38%</td>
<td>5</td>
</tr>
<tr>
<td>Evolutionary Computation</td>
<td>46.32%</td>
<td>88</td>
<td>93.33%</td>
<td>196</td>
</tr>
<tr>
<td>I don’t know</td>
<td>0.53%</td>
<td>1</td>
<td>0.95%</td>
<td>2</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>100%</td>
<td>190</td>
<td>100%</td>
<td>210</td>
</tr>
</tbody>
</table>
**Student comments on ENG 101 Information Literacy Program 2018 -2019**
Classes conducted by Jane Lewandoski – Fall & Winter Combined

After completing the on campus and online ENG 101 information literacy assignment, students are given the opportunity to provide anonymous comments on the program. Almost all students participate. Representative comments from students who attended Jane’s classes are given.

**What is the most valuable piece of information you learned during the orientation? (On-campus responses)**

- Knowing that the online library services are on 24/7.
- Not “most valuable” but fun – RFID clickers
- How to tell if a source is reliable or not.
- The MLA format to citing information.
- The most valuable piece of information I learned was the Boolean search. I learned “and” is more effective.
- How to properly research information on the internet to find exactly what I am looking for.
- The most valuable piece of information I learned was the searching techniques.
- How to refine searches using Boolean, “”, and ()
- I learned that the SC4 library is very helpful especially the online version. I ever knew I can look up articles on this site for my papers. Also, the library chat box is open for questions which I didn’t know of at any time of the day.
- How to use MLA format.
- There are tons of ways to find a source for a paper.
- How to effectively use a database to find what I need.
- The difference between a magazine and a news article.
- How to cite and use “AND” and “OR”
- How to use words when searching for info that will give you more specific results.
- The library can help 24/7 with any questions.
- That I can access a reference librarian at any time.
- How to search for articles, books, and videos.
- Quotation marks (“”) and how to use AND and OR.
- That you can text the library when you need them and that there is a 24/7 chat.
- How to breakdown “One Search”
- Learning about copyright rules.
- Accessing the library from home.
- How to narrow searches and properly cite sources in MLA format.
- AND or OR
- How to work my way around the library website. *A lot of students have no idea.
- How to use the full text databases.
What is the most valuable piece of information you learned during the orientation (Online IL responses)

- The most valuable piece of information I learned was how to correctly search for topics and certain subjects.
- How to refine my search as well as how to find reputable sources.
- Different ways to search for certain things was something I found to be very valuable.
- That it provides the citation. Citing is so confusing to me, not that we have to do but how you actually cite it. This is a great resource for me.
- how to cite
- how to navigate the library searches and they are available anytime
- How to refine my search to credible and peer-edited works.
- Knowing you can access the library online. I did not know this source before now.
- The MLA citation button was very useful, and I will definitely use it in the future!
- It's easier to fined works to cite in the databases, and Boolean logic.
- Probably learning how to research the right articles.
- How to narrow and widen my searches while looking for articles or videos.
- The most valuable piece of information was putting "" around searches to keep the words together.
- The most valuable piece of information I learned during the orientation was how to find citations.
- The understanding of MLA 8th Edition.
- Being introduced to the digital library, as I had not used it yet.
- That it will cite the sources for me. NO MORE EASYBIB!!!
- All the sources available to me. I had no clue!
- Citing help
- How to correctly google and search for the information I need.
- That the databases offer built-in citation.
- Learning how to use the search properly.
- How to use the different sc4 services to their potential.
- I already knew this information. It was required for high school. Their website is similar to SC4’s. Videos are a nice touch.
- Search resources
- MLA citations. Those are difficult for me to create.
- All of the information that can be found in the online library
- everything was quite helpful
- The most valuable thing I learned was how to evaluate sources.
- that I can watch videos on the topic.
- How to cite in MLA format
- How use the "cite" area.
- How to use the e-library sources!
- Learning how to easily find professional books and articles that could help me for future essays.
- How many different databases the library has access to for research.
- The MLA formatting assistance that is available online.
- How to better a search for more narrow results
- All of the help and information that is available to us even when not on campus.
- The search methods were informational. Thank you for the hints. I think this exercise would be best if the questions weren't confusing in the beginning.
- The different citation options easily available.
• How to search.
• too much info at one time for someone who is still learning how to use online site. The video's were helpful!
• There is a lot to the online library.
• 24/7 communication
• Climate change needs to be taken more seriously
• just how to navigate around the site.
• How to change cite format

What was the least valuable part of the orientation? (On-campus responses)

• Nothing was really least valuable. Everything was important in a different way.
• Learning about MLA format because it was prior knowledge.
• I thought it was all valuable.
• The extra page of MLA format.
• Nothing, everything was new to me.
• Probably the tour but it is still good to know where everything is.
• How to correctly source citations.
• Knowing the volume of the article or paper.
• Nothing, it was all very useful information.
• Asking if the articles were biased.
• The clickers were fun but I don’t think it was very helpful.
• The library hours.
• MLA formatting because I already knew how to do it.
• The subjects picked for reading.
• The trip around the library.
• Everything in the presentation was very valuable.
• Least valuable part was doing the same questions for the post test. Maybe should’ve mixed it up.
• Timing. I got 6/12/ hrs of sleep. Though, that was more my fault than anything else.
• Nothing 😊

What was the least valuable part of the orientation? (Online IL responses)

• Everything was at least somewhat valuable to me.
• I thought everything was useful.
• Having to go through each different database example. They are seem similar to one another so there was no need to explain CQ researcher or ProQuest central search, etc. It became repetitive.
• the setup
• none, it was all valuable
• There was no un-valuable parts but if I had to choose it was probably the question on the quiz "Which of the following provides evidence of climate change?" I wasn't exactly sure if the articles I didn't choose are related to climate change or not because I have no background knowledge on climate change.
• Any knowledge can be useful. I am sure at one point I will use the online library.
• I did believe that using a search bar was self explanatory.
• How to use each of the individual databases.
• Nothing I can think of
• It was all useful information.
• The least valuable part was the first video about contacting the library because that is easy to find on the homepage.
• I found all of the information to be valuable.
• The eBooks
• Nothing.
• The hours and ways to contact the library.
• One video not loading. YouTube video
• Reading
• All the info was useful.
• I feel as if some of the videos were repetitive.
• I don't think any of this was invaluable.
• All of the information was useful to me. I am a student returning after a ten year hiatus. It is wonderful to have access to such tools.
• I found all of it to be valuable.
• I kept having to resign in and it was not accepting my password
• The least valuable was how to contact someone because I already knew it, still good information though!
• I think all the information was valuable.
• Everything was useful
• I did not have a least valuable part.
• Repeating how to narrow a search and cite in different ways and in multiple videos
• Nothing
• all of it
• Finding evidence.
• Searching for stuff
• I never understood or was able to find out how to copy and paste my "permialink"...????
• it was all valuable if you haven't used yet. I have already had to use it for my phycology class, however I wish I would have received this assignment first as I would have been able to find things much faster. This should be given as assignment on first week.
• I can't think of any
• N/A [multiple responses]
• it was all helpful.

Do you have any other comments about the orientation? (On-campus responses)

• I am very glad that we had this orientation because it was very helpful and I learned a lot.
• I liked the multiple choice questions we answered with the clickers.
• I did enjoy the opportunity to learn more information about the differences between a trustworthy and not trustworthy paper.
• The lady was nice and patient with our class.
• It was very easy to listen and well explained.
• Very helpful and makes me very comfortable with the website.
• More pics
• Clickers were fun.
• Great way to learn about how to use the site!
• No, I do not. She was a very nice lady and so helpful.
• No, all together it was a really good orientation.
• It was super helpful!
• No, not really. I just really enjoyed the Library Orientation experience.
• Well presented. Easy to follow.
• Good job.
• I liked how the instructor taught us how to use the SC4 library website properly.
• The woman was very nice and helpful 😊
• Very helpful and clear understanding!

Would you recommend service the library provides, such as help from a reference librarian or using the full text databases, to other SC4 students? (On-campus responses)

• Yes, there are many many texts in the database and there is always someone on staff ready to help.
• Yes, they are very helpful in finding materials. Thank you for teaching us everything!!
• Yes, of course! It has already helped me and I know it could help others.
• Yes, the 24/7 tool is helpful.
• No. The worksheet provided (this worksheet) was sufficient.
• Yes, I have used them before and it helped narrow down my topic I was searching.
• Of course! I would recommend all of the reference help and suggest the online library to offer help and assistance.
• Yes, not everyone takes ENG 101 right away.
• Yeah, if they really needed it.
• Yes, I would. [Multiple times]
• Yes! Absolutely!
• Actually, yes, I would recommend all that the Library provides.