Connections in Information Literacy Responses: IL in the Undergraduate University Experience

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Abstract

This study was conducted at a four-year state university to compare differences in information literacy knowledge between students at the first-year, sophomore, junior, and senior levels. The survey included questions about reading habits, library usage, and information literacy knowledge, and was shared with 10,967 students with a 15.7% response rate. Analysis of the responses found reduced participation from sophomores, a positive relationship between required course use of the library and actual use of the library, a positive relationship between library exposure and accuracy of responses, and other academic connections to information skills.

Keywords: information literacy, academic libraries, assessment

**Connections in Information Literacy Responses: IL in the Undergraduate University
Experience**

Central Washington University is a public institution located in Ellensburg, with a total

enrollment of approximately 11,500 students as of 2019-20. The majority of undergraduate

students attend full-time (89.3%) and are WA residents (91%) (CWU Analytics). Library

instruction is provided through the First Year Experience, English Composition, and courses in

the disciplines, delivered through in-person instruction, Canvas modules (CWU LMS), and

various point-of-need tutorials. The library instruction program aims to impart information

literacy competencies to students throughout their education. Inevitably some receive more

instruction than others. At a ratio of one librarian to roughly 960 students, the librarians have a

limited ability to apply efforts equally across all academic programs while also fulfilling other

responsibilities. The strength of the relationship between the library and academic departments

varies widely, affecting the amount of library instruction students receive.

In practice, IL instruction at CWU has been most concentrated at the first-year level

through the general education program and introductory English classes. Thus, most traditional

students receive at least one session or Canvas module of IL basics in their first or second year.

Librarians teaching these sessions aim to impart at least the most essential aspects of engaging in

scholarly conversations. At a minimum, students will be comfortable using the library catalog,

finding physical materials, and asking for help. Ideally, students are also gaining competencies in

evaluating sources. This research focuses on answering the primary question of whether there are

notable differences in IL knowledge among students at the first-year, sophomore, junior, and

senior levels. This type of scaled assessment had not been conducted at CWU previously, and

the findings are useful for further IL instructional design, supporting IL research in higher

education at a broader level, and understanding student information behaviors. This study sought to answer the questions: What information literacy behaviors do students demonstrate? Do students demonstrate a significantly greater degree of IL knowledge as they advance in years at school?

Literature Review

This project began with a specific focus on the IL skills and needs of sophomore students before expanding it to students at all class levels. Whitmire (2001), as well as Hulseberg and Twait (2016) found that sophomores were less likely than first-year students to ask a librarian for research help; the latter study indicated that they were often uncertain as to when and why they would. This is significant because instruction should convey this connection for students. There are many possibilities for explaining different rates of using the library. Lower rates of seeking library assistance among sophomores, juniors, and seniors could be taken as a sign that first-year library instruction has been largely successful in imparting basic knowledge about the library and its resources as well as how to conduct college-level research. This possibility was supported by Lanning and Malek; sophomores, juniors, and seniors did better than first-years on the pre-testing component of their IL assessment project (2017). However, regardless of class standing, students have greatly varying levels of comfort with using the library; some, for whatever reason, avoid doing so if at all possible (Colon-Aguirre & Fleming-May, 2012).

In considering instruction in the first-year, one might ask what constitutes a satisfactory return on a first-year IL instruction program? This, of course, must be answered on an institutional basis. While there may be a core set of information literacy skills that all academic librarians would like their students to know or feel comfortable doing, it is difficult to establish a standard for what may be considered "adequate" or "average" IL skill levels or library usage

rates for students across all institutions (Rumble & Noe, 2009; Hollis, 2018). A baseline of knowledge for a group and tools of assessment at an institution should be informed by factors such as: percentage of students who are first-generation college attendees; prior K-12 IL instruction; frequency of other library use; and general reading habits. It may be tempting to assume that an inclination toward reading would go hand in hand with more frequent library use, but Parlette and Howard showed that this is not necessarily true; even avid readers may prefer to get their books from other sources (2010). On the other hand, Whitmire's (2003) study found a positive correlation between the number of "non-assigned books" read and academic library use.

While there are many different IL assessment methods represented in the literature, the most prevalent type is the multiple-choice questionnaire or test. This approach has some obvious advantages, such as ease of implementation and data processing, but also has its drawbacks. Hollis expresses a preference for more open-ended, qualitative methods, as "multiple choice is only testing participants' knowledge and not actual ability" (2018). McCulley (2010) also comments on the key distinctions between traditional "knowledge tests" and informal or performance-based assessments; they are a proponent of the use of annotated bibliographies as assessment tools. Other IL researchers have employed common qualitative methods in their studies, such as interviews and focus groups. For example, Head's (2008) study included the use of discussion groups and the analysis of assignment handouts from various professors; the goal of the former was to collect qualitative data about student research habits, while the goal of the latter was to learn more about how much guidance professors gave their students on conducting research.

Methodology

This study ultimately used a quantitative approach to its methodology, partly because the authors wanted to gather a broad set of data that could inform potential changes to all of the library's IL-related programs and services, and partly for reasons of expediency and privacy. Throughout 2019 and 2020, the CWU Libraries was in the midst of transition and change with the arrival of a new permanent dean and a new associate dean, and one of the authors took a new position before the survey was distributed. This choice of methodology proved to be fortunate, as the sweeping changes to academic life caused by the COVID-19 pandemic beginning in March 2020 would have undoubtedly disrupted a qualitative research project. Had the pandemic not occurred, the researchers may have wanted to follow up with respondent interviews or focus groups, as Latham and Gross (2013) did with groups of respondents who exhibited reduced IL skills.

The goal of surveying students as first-years, sophomores, juniors, and seniors at the same time was to create a slice of comparable knowledge and behavior. Unlike other studies tracking changes in behavior over time, this study looked at behavior between groups at the same time. The value of such a snapshot is in comparing behaviors between groups. No other study of this nature had been conducted at CWU. Through the survey design, the researchers sought to answer the following questions:

1) What level of information literacy knowledge do students have as first-years, sophomores, juniors, and seniors?

2) Are there connections between student library knowledge and information literacy, and the amount of prior library exposure?

Development & Design

This study was developed and conducted over the span of six months, which included developing the survey, receiving institutional review board approval, and administering the survey electronically over two weeks in January 2020. The survey included 22 questions in categories of: Demographic Information; Library Experience; Basic Library Knowledge (Library-Centric); Information Literacy (Critical Thinking Ability, Ability to Use and Create Information, Ability to Discover and Access Information); and Self-Assessment (see Appendix). Most questions were drawn from the set of internationally gathered and face validity tested questions from *Open Test of Information Literacy* (Hollis, Rachitskiy, & van der Leer, 2019).

Keeping the survey brief was a priority and therefore only included a small number of questions for each content area. Questions were designed to gauge a level of thinking about a topic, but represent a limited capture of knowledge. The researchers decided on a homegrown assessment over some of the longer tools available in order to keep the assessment short, focus on specific knowledge areas, and use questions from the *Open Test of Information Literacy*. Questions were tested with students early to check for clarity and interpretation, and modifications were made to the survey. All questions were multiple choice to keep them easier to answer (with the exception of one free response question) and included an option of "I don't know." At the end of the survey, students were asked to rate how well they thought they had done on the questions. The survey was built and administered using Qualtrics software.

Demographics & Distribution

For this study, the authors did not collect age or gender demographics and looked primarily at year in school; participants included all first-years, sophomores, juniors, and seniors at the institution. The number of students contacted, 10,967, was based on enrollment from fall

2019, but confirmed enrollment for winter 2020 quarter reflected 10,473. Therefore, only 10,473 were actually eligible to participate with valid CWU emails. Emails were sent using Qualtrics and participants received two email invitations: the initial invitation to participate and a reminder email one week later to those who had not yet completed the survey. Participation in the survey was voluntary and participants who completed the survey had the option of entering into a drawing for one of six gift cards.

Survey participants were required to be 18 years of age or older. Response rate for the survey was 15.7% with a 93% completion rate. Participants included: 437 first-year students, 247 sophomores, 530 juniors, and 501 seniors for a total of 1,715 students. Eleven responses were not used as the students indicated non-matriculated status. The median length of time spent on the survey was 8.6 minutes. Of the 119 majors represented, the top five majors were Undeclared (138), Business Administration (120), Psychology (112), Elementary Education (105), and Biology (70). The participation rate among sophomores (envisioned as the survey's target audience in the early phases of this project) was markedly lower than the other classes.

Analysis

After closing the survey, results were analyzed using Qualtrics' tools and by downloading cross-comparisons. T-tests, ANOVA, and regressions were used for analyzing the results. Since the purpose of this study was to look at information habits and knowledge across four groups, rather than demonstrate causation with a control group, analysis involved significant group comparison and evaluating trends of behavior within a group. Outside statistical analysis, percentages are used frequently in the results to reflect a more realistic comparison given the uneven group sizes. The results present some of these trends and notable comparisons.

Results

Reading Habits

Reading habits were examined to better understand student interaction with various reading materials. Questions asked students to evaluate their reading frequency on a basis of daily, weekly, monthly, yearly, and never. A finding of note was that 88.3% of students are reading books for school on either a daily (47.7%) or weekly (40.6%) basis. In evaluating reading habits between class standing, all followed a similar frequency distribution for newspapers or magazines. Reading frequency for peer reviewed articles saw the largest range of difference between groups and was actually between sophomores and seniors; 15.8% of sophomores and 25.7% of seniors were reading peer review articles on a weekly basis. Seniors reported reading the most peer reviewed articles of any group. When considering the option of "Never read", 17.4% of students indicated they never read the news or magazines, 20.6% said they never read peer reviewed articles, and 20.7% said they never read books for fun. Only 1.6% indicated never reading books for school (a total of 28 students). In looking at the largest difference between groups, seniors were 8.5% more likely to never read for fun than first-year students, suggesting seniors traded in reading for fun with other sources.

In reviewing the impact of reading habits on accuracy of responses, the highest correlation was between students who read peer reviewed articles on a monthly basis and the accuracy of their answers. When combining responses for frequency of reading into clusters of daily, weekly, monthly, yearly, and never, there was a significant connection between reading more frequently and answering more accurately (p=0.002, two tailed). Reading of any format on a daily, weekly, and monthly basis saw the largest change toward answering accurately. As students moved into the yearly and never categories, the difference between answering

accurately and inaccurately became less pronounced and suggests more chance in responding accurately.

Use of the Library

Use of the library was examined to look for connections or correlations to other responses. Reviewing use of the library by type of use indicated that first-year students were 13-18% more likely to visit the library and 17-19% more likely to have a Canvas module about using library material than sophomores, juniors, or seniors in the fall quarter. Students from all class standings indicated having assignments that required sources from the library within a range of 62.8-68.4%. The lowest category of use was having a visit from a librarian, with students indicating between a range of 15.8% (seniors) and 22.9% (sophomores).

In reviewing accuracy of responses in connection to library use factors, one or more of the following significantly increased the students' accuracy: visiting the library, accessing a Canvas module about using library materials, and assignments that required sources from the library. The only question that did not show any difference with regard to these factors was correctly answering how books are arranged in the library. A simple linear regression was used to compare students answering correctly and reporting assignments that required library resources, with students answering correctly and reporting frequency of visits to the library. There was a positive correlation between assignments that required use of library sources and frequency of visits to the library ($F_{(1, 3)}=44.28$, $p < 0.05$), with $R^2=0.9365$. There was also a positive correlation between accurate responses for those with assignments that required use of library sources and completed a Canvas module about using library resources ($F_{(1,3)}=162.89$, $p < 0.05$), with $R^2=0.981$. In both scenarios, assignments that require library sources and Canvas modules that discuss library sources increase a student's chance of visiting the library.

In looking at how students reported the number of assignments requiring library sources, the authors found: 31% had zero, 56% had one to three, and 13% had four or more. Of the first-year respondents, 71% had one or more classes require sources from the library compared to 64% of sophomores. Figure 1 illustrates the trends of use by each class, and the differences between first-year students from their peers in categories of visiting the library and use of a Canvas module. While the authors consider "library sources" to include any library webpage or external vendor links (e.g. LibGuides, databases, etc.), the question was intentionally left open for user interpretation.

Figure 1

Use of the Library by Class Standing

*Use of the Library by Class Standing*
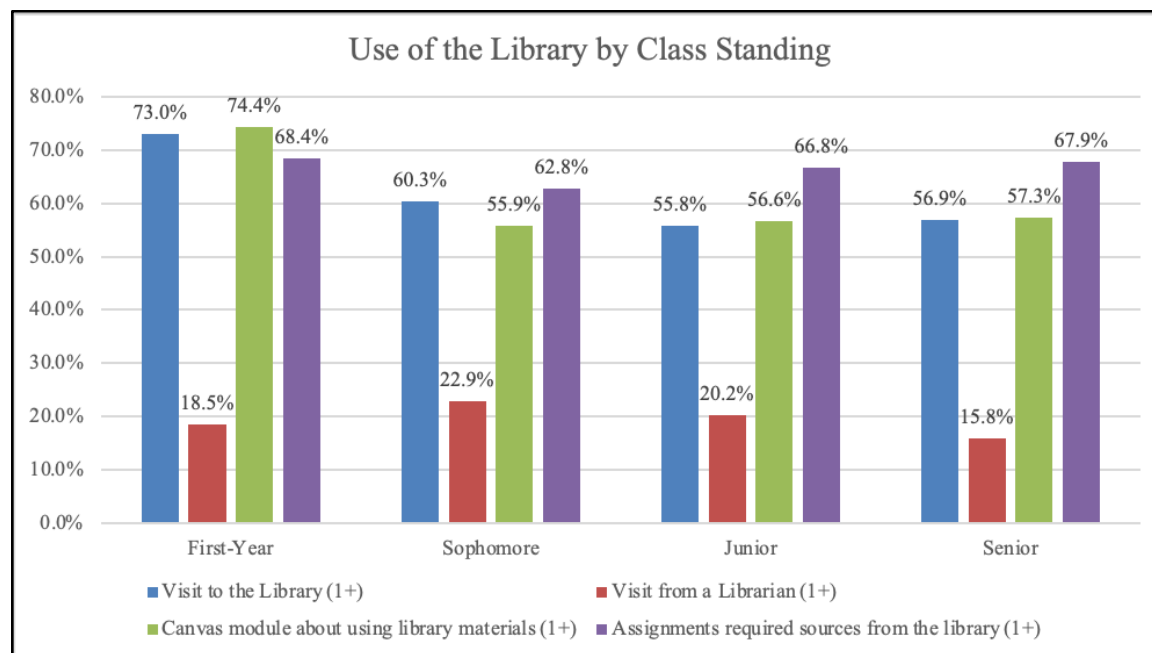
Student Knowledge and Self-Assessment

At the end of the survey, students were asked to rate themselves on "what do you perceive to be your skill level when conducting research for an academic assignment?" with options of Basic, Intermediate, Advanced, and Expert. For each class standing, the majority of

students assessed themselves at an Intermediate level (57% overall); the second most selected

category was Advanced (28%). Less than 25 (n=1,505) students across all class standing

indicated they felt they were researching at an Expert level. While more seniors rated themselves

as Advanced than any other group, there was no statistically significant difference between how

students between the four classes rated themselves.

Figure 2

Accuracy of Response by Percent of Class
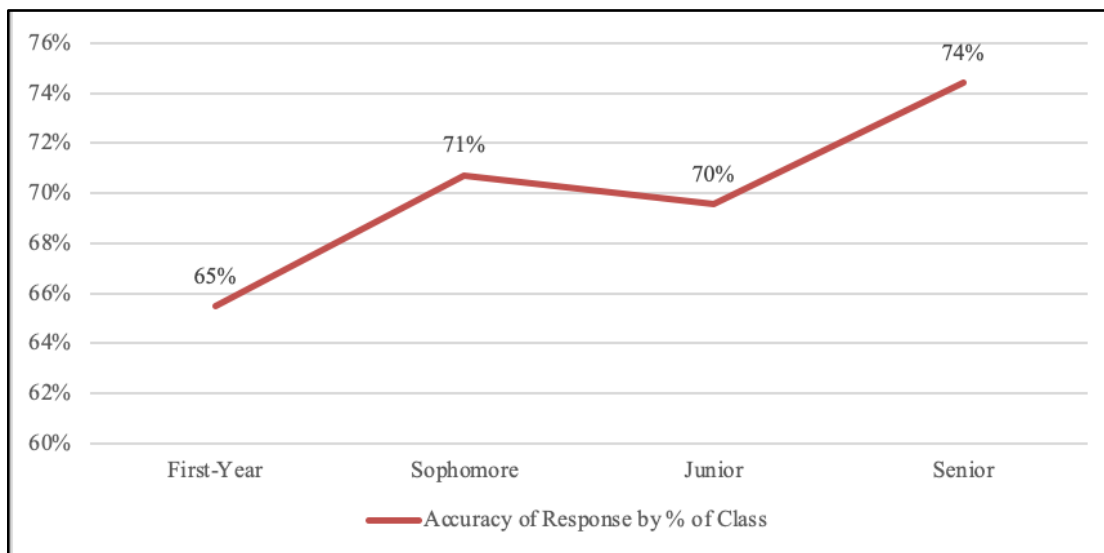
When reviewing actual accuracy of responses, with the exception of sophomores and

juniors there was a trend of increasing averages (Figure 2). In comparing first-year students to

seniors, seniors were significantly more accurate in their responses (p=0.0005, paired t-test) with

a 9% increase in accuracy between first-year and senior students. In looking holistically at the

results as shown in Figure 3, class averages were very similar on some questions and had a much

wider variation for others. Most questions show stepped increases in accuracy between first-year,

sophomores, juniors, and seniors. In comparing sophomore students to juniors, there was no

significant difference in accuracy between the two groups, despite sophomores answering more

accurately on seven out of the twelve questions analyzed.

Figure 3

Variation in Percent Accurate Between Classes
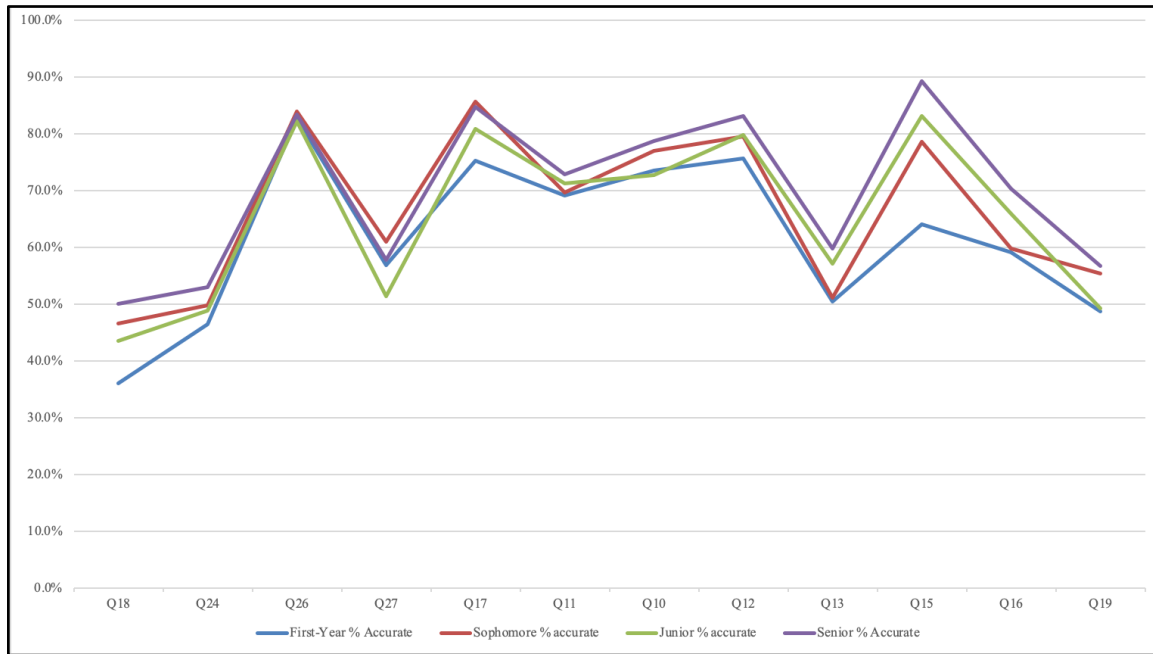
When looking at students who responded with 100% accuracy within the categories of Basic Library Knowledge, or Information Literacy, the authors saw a similar upward trend between classes. For the 206 students answering all questions accurately in the Basic Library Knowledge category, the class breakdown was: 13.6% first-years, 19.4% sophomores, 27.7% juniors, and 39.3% seniors. The 206 from the Information Literacy category had a slightly different class breakdown with 12.1% first-years, 18% sophomores, 31.6% juniors, and 38.3% seniors. Both sections demonstrated response accuracy increased with one's class standing (Figure 4). In total, only 47 participants selected the correct responses for all Basic Library Knowledge and Information Literacy questions with the following breakdown: 10.6% first-year students, 17% sophomores, 32% juniors, and 40.4% seniors.

Figure 4

Basic Library Knowledge and Information Literacy Comparison by Percent of Class
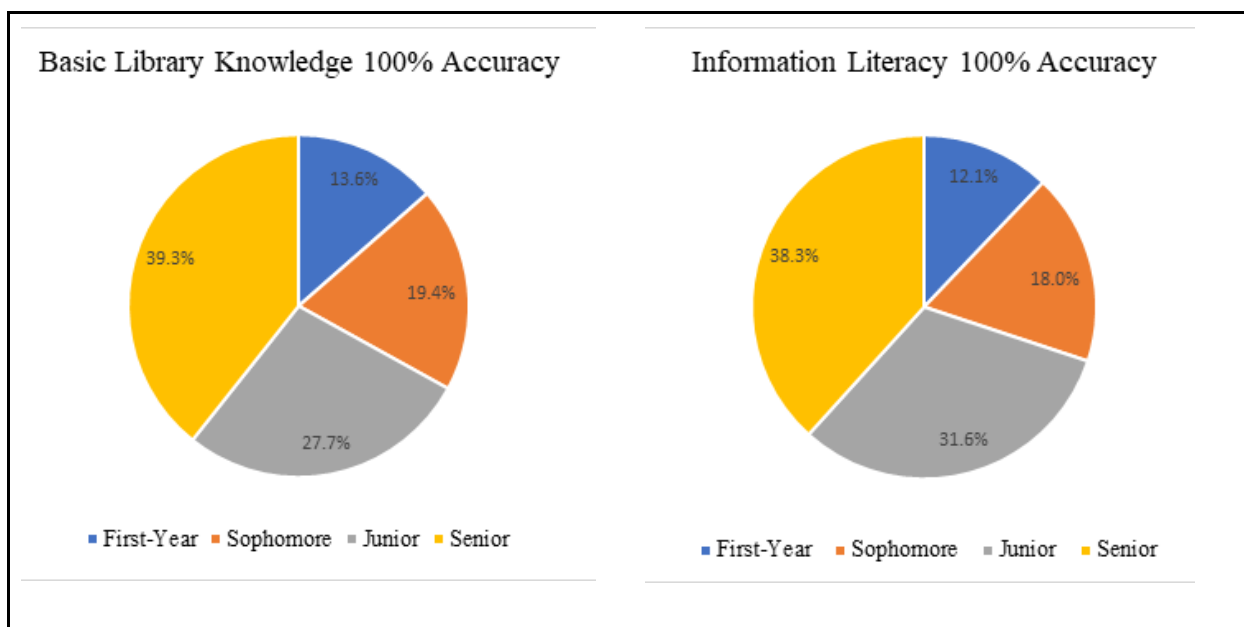
Circling back to Figure 3 for further review, the authors note that questions Q18, Q17, and Q15 have the largest ranges of percent accurate between classes. The nature of these questions dealt with choosing an effective search strategy, identifying the purpose of an abstract, and identifying a resource from its citation. The question that saw the largest difference in accuracy was "An abstract is which of the following?": a) A list of all the sources cited in an article; b) A list of acknowledgements of funding sources; c) **A summary of an article;** or d) I do not know. What is listed as Q17 in the image gave participants the following scenario, "In your assignment, you want to describe the impact of human activities on climate change. Your initial search returned an overwhelming number of documents. Which of the following will help you narrow down your search, without reducing the quality or accuracy of information?" While most students answered this question with, "**I choose a smaller theme within the topic, input key words that match this theme, and search again,"** the second most selected choice was "I

look for related articles written by a well-known author and rework the content of that article."
The selection of the later response suggests both a stopping place in the research process and a
tendency to "rework" articles of interest in opposition to interpretation or deeper writing
integration.

Discussion

While the snapshot of IL skills gathered in this study may not draw causality or by
necessity suggest the impact of IL instruction in entry-level courses, it can help in reflecting on
whether students are changing in their IL knowledge. While not demonstrating a surprising
trend, it would appear faculty are justified in the assumption that seniors are doing more reading
of peer reviewed articles. They also performed better on the question about defining the purpose
of an abstract and are more likely to rate themselves as Advanced. Seniors also demonstrated a
9% improvement in accuracy compared to first-year students. While the authors are not
comparing the same students, this performance snapshot does contribute to the narrative that
seniors are improving their IL skills during their university experience.

As a distinct group in this study, sophomores demonstrated a surprisingly low turnout.
The authors theorize this low participation may relate to what is commonly termed the
"sophomore slump"—a feeling of disconnection and confusion related to academic direction and
satisfaction. The sophomore experience in the United States has been intermittently examined
dating back to 1956, but has gained more attention over the past few decades (Freedman, 1956;
Tinto, 1993; Pattengale & Schreiner, 2000; Graunke & Woosley, 2005; Sterling, 2018). Multiple
factors contributing to this phenomenon include the pressure to select a major, increased
academic workload and expectations from instructors, and decreased specialized campus support
services.

While the average performance of the sophomore class in this study is not much different from juniors, reviewing the high achievers tells a different story. When considering breakdown of class standing for students answering all the questions correctly in this study, sophomores experienced the smallest increases in accuracy compared to their peers. Juniors increased in accuracy from sophomores by 8.2% and 13.5% on questions about library knowledge and IL knowledge respectively. Seniors increased in accuracy from juniors by 11.5% and 6.8%. In comparison, sophomores only increased 5.7% and 5.9%. When thinking about leaps in developing knowledge, comparing these step increases helps understand how sophomores are performing as a group.

A 2013 study found 56.4% of sophomores at four-year public institutions are receptive to receiving academic/tutoring support, among other types of guidance, such as career, financial, etc. (Noel-Levitz Inc.). Seeing that sophomore involvement on the survey was lower and accuracy growth was smaller among the highly accurate students, knowing that the majority of this population is open to receiving support is useful for any academic library. Methods to encourage reengagement could include: targeted services or awareness efforts, such as a reminder email at the beginning of the quarter with a brief overview of what the library offers; piloting a peer researcher program or collaboration with existing campus programs; or working with faculty teaching second-year classes to incorporate more hands-on library time.

A notable observation relating to all students came from the reading habits results. In lumping daily or weekly together, 88.3% of students reading books for school on a daily or weekly basis sounds very positive. When breaking them apart, 47.7% are reading daily and 40.6% are reading weekly. While what counts as "reading" was not defined for students, the responses for weekly may be inconsistent enough to be cause for concern given reading's central

role in learning. This is also framed within the finding that reading more frequently (of any format) was connected to answering more accurately.

In considering the questions that students found most challenging, one response that stands out for mirroring current behavior relates to summarizing research. In response to "...Which of the following will help you narrow down your search … ?" most students selected the most accurate method. However, the choice of "look for related articles … and rework the content of that article" was second in selection. This response mirrors a re-wording and summarizing writing style composition faculty anecdotally observe with some frequency as students develop their writing skills. This is also a clear connection where research skills cross into writing skills. As students transition from summarizing to analysis, this increase in analytical capacity matches with intellectual progression described in Bloom's Taxonomy in such categories as Comprehension versus Analysis (Bloom, Krathwohl, & Masia, 1984). For libraries and faculty, this serves as a good reminder that the search process and the writing process go hand-in-hand with instruction.

One fascinating takeaway from the results includes a cycle of interconnected effects. Assignments requiring library materials and instruction about using the library are connected to increased use of the library. Increased use of the library is connected to responding more accurately to information questions. Was it the assignment that required the instruction, the instruction that prompted the assignment, or something else entirely? Was it one thing causing the effect, or the interconnection of them all? While teasing out what prompted this connection may not be possible, the end conclusion seemed to be: more library equals better accuracy.

Limitations

The researchers recognize some challenges of this study and it is worth mentioning a few here for anyone wishing to replicate at their own institution. A primary limitation of this study is relying on participants to not only voluntarily participate, but also provide accurate responses. As with all optional surveys, self-selection bias is a concern. The percentage of sophomore survey participants (14.4%) is proportionally smaller than the percentage of sophomores at CWU as a whole (18.5%) (CWU Analytics). The reasoning behind this is not entirely clear; however, as previously discussed, the authors theorize the sophomore slump comes into play.

While not entirely a limitation, but worth an explanation, is that the timing of this survey may have contributed to the 65% accuracy score of first-year students. By winter quarter most first-year students have completed a library introduction through one or two of their courses in fall quarter and may create more familiarity than if they had been tested in the beginning of fall.

Conclusion

In a holistic review, the results of this study serve as a collective baseline on student IL knowledge at the institution. While not longitudinal in nature, this snapshot captures some common areas of confusion, as well as knowledge differences between class standing. Instructional takeaways from these findings include: providing targeted outreach to sophomores could increase their participation; teaching the search process as part of the writing process may clear up confusion for students; using the library through visits and online material is positively correlated with question accuracy; and requiring library-use in coursework has a direct connection to whether students use the library.

Conducted prior to the closures of higher education campuses resulting from the COVID-19 pandemic, these findings come at a time of new challenges for university libraries. Campus

closures have forced the implementation for online education, or in some cases amplified the need for work already being created online. It has also forced teaching librarians to re-prioritize what matters most in library instruction. Issues such as the arrangement of books on a shelf or the location of library spaces are irrelevant, temporarily or long-term. However, knowledge in digital citizenship, search engines, effective search strategies, and understanding information creation are as relevant as ever.

At the same time, pinched budgets are forcing creative thinking around accomplishing work differently. The realities of COVID-19 in partnership with the findings of this study accelerate the need to prioritize IL skills over library-centric skills. Finding the appropriate blend of database systems knowledge to find the information in question, and equipping students with general IL knowledge to handle the information found, is a moving target of shifting priorities. The question of value or need in developing effective online research skills also requires less convincing, and the new level of online delivery is an opportunity for libraries to showcase existing online IL materials, and develop new integrated material.

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APPENDIX

Survey Questions

Q1. What is your current class standing?
- First Year
- Sophomore
- Junior
- Senior
- Non-matriculated (5)

Q2. How much reading do you do?

	Daily	Weekly	Monthly	Yearly	Never (5)
Books for fun					
Books for school					
Newspapers/Magazines (including online)					
Peer-reviewed journal articles					

Q3. Which is your major?
▼ Undeclared/unsure (141) ... Womens, Gender, and Sexuality Studies Major (140)

Q4. Which of the following resources do you use the most when working on a research assignment? (Select top 3)
1. Web search (i.e. Google, DuckDuckGo, etc.)
2. Wikipedia
3. Library databases (i.e. JSTOR, Academic Search Complete, etc.)
4. Library catalog (OneSearch)
5. Google Scholar
6. Friend/classmate
7. Other _____

Q5. What service, skill, or resource do you think is the most beneficial to improving your research skills?

_____

Start of Block: Library Experience
Q6. How frequently do/did you access the library?

	Daily	Weekly	Monthly	Yearly (5)	Never (6)
Public Library - in person					
Public Library - online					
High School Library - in person					

High School Library - online					
University Library - in person (5)					
University Library - online (6)					

Q7. How many of your classes at CWU required using the library during the 2019-2020 school year?

	0 Classes	1	2	3	4+
Visit to the library					
Visit from a librarian					
Canvas module about using library materials					
Assignments required sources from the library					

Start of Block: Basic library knowledge

Q8. How are books arranged in the library?
- **By call number**
- Alphabetically by author
- Alphabetically by title
- By most current year

Q9. A research librarian would be a good person to get help from for all of the following EXCEPT:
- **Figuring out what my instructor requires on an assignment**
- Formulating a research topic/question
- Finding peer-reviewed sources
- Checking my citations

Q10. If I find a source in the catalog that isn't available as full-text, but which I want for an assignment, I should:

- Look for it on the open Web (e.g. Google Scholar)
- Just use the abstract
- **Follow the "No full-text' link to request it by ILL**
- Give up on it and choose another source

Q11. In your assignment, you want to describe the impact of human activities on climate change. Your initial search returned an overwhelming number of documents. Which of the following will help you narrow down your search, without reducing the quality or accuracy of information?
- **I choose a smaller theme within the topic, input key words that match this theme, and search again.**
- I google climate change and find some websites with general information on the topic, and I summarize these.
- I look for related articles written by a well-known author and rework the content of that article.

- I do not know.

Q12. Based on the following citation, what can you conclude?
Baker, W., & Dube, L. (2010). Standard practices in research library book conservation: A review of the literature. *Library Resources & Technical Services, 54*, 21-39.
- This is a primary source.
- **This is an article.**
- This is a book.
- I do not know.

Start of Block: Information Literacy

Q13. Which of the following sources is most likely to contain outdated information?
- Field Guide to North American Trees, published in 1980.
- The Poems of Edgar Allan Poe, published in 1982.
- **Computer-based Instruction, published in 1983.**
- I do not know.

Q14. Which statement on GMO (Genetically Modified Organisms) is NOT an author's personal opinion?
- GMO will bring about a global food crisis.
- **According to inventories, 15 new GMOs were registered in the European Union in 2013.**
- Most GMO researchers have been paid off by large corporations, such as Monsanto.
- I do not know.

Q15. You want to submit a poster to a competition run by your local city council, the topic is: Saving Water. Which of the following would be a subject for your poster that matches the topic and is suitable for this audience?
- How the global water crisis is fueling conflict in the middle east.
- **Top tips for reducing water usage in your home.**
- The increasing costs of water rates over the past twenty years.
- I do not know.

Q16. You have read this article and you found it extremely useful:
Smith, P. (2017) The effects of cute kitten imagery on chocolate purchasing. *The Journal of Consumer Behavior, 5*, 24-31.
Which of the following would NOT be a good strategy to find more similar articles?
- Look at the reference list in the article and try to find some of the articles cited.
- **Search for Smith as an author in the library catalogue.**
- Search in other issues of The Journal of Consumer Behaviour.
- I do not know.

Q17. An abstract is which of the following?
- A list of all the sources cited in an article.
- A list of acknowledgements of funding sources.

- **A summary of an article.**
- I do not know.

Q18. You take a short video of your friend Sabine twirling in front of the Eiffel Tower. Who owns this video?
- Sabine does, because it's a video of her.
- *Société d'Exploitation de la Tour Eiffel* owns it, because they manage the Eiffel Tower.
- **You own it, because you filmed the clip.**
- I do not know.

Q19. It has been scientifically established that cholesterol is present in animal organisms but not in plants. How would you best describe a TV commercial which claims that the sunflower oil manufactured by a particular producer contains no cholesterol?
- This is a valuable benefit, and it will encourage me to buy this brand of oil.
- **This is manipulative and misleading information, as plant oils do not contain cholesterol.**
- This information has medical significance, and I am therefore willing to pay more for this oil.
- I do not know.

Start of Block: Self Assessment

Q20. How well do you think you did on this survey?
- Extremely well
- Very well
- Moderately well
- Slightly well
- Not well at all (5)

Q21. I know how to effectively...

	Not Comfortable	Somewhat Comfortable	Mostly Comfortable	Completely Comfortable
Locate materials in the library's collections on my own.				
Brainstorm additional words or phrases.				
Determine if a source is appropriate for a university-level assignment.				

Distinguish among popular, trade, and scholarly resources.				
Locate sources that will help me determine an author's credibility and authority. (5)				
Contact the library staff if I need assistance. (6)				

Q22. What do you perceive to be your skill level when conducting research for an academic assignment?

- Basic
- Intermediate
- Advanced
- Expert