Understanding Students' Information Literacy Skills:

Summary of Evidence from AY 2023-2024

Cal Poly Pomona (CPP) is deeply committed to ensuring an educational experience that fosters student learning and success for every student. As part of that commitment, with the Academic Assessment Committee, the Office of Assessment and Program Review leads the assessment of undergraduate learning outcomes each year, focusing on gathering evidence of *Information Literacy in* 2024. The evidence is used to understand student learning and experiences concerning their information literacy skills. The findings also assist the institution in learning about potential equity gaps, and subsequently identifying additional resources to improve undergraduates' development of information literacy skills.

As a General Education (GE) learning outcome at CPP, *Information Literacy* is defined as students being able to responsibly identify, locate, and critically evaluate the array of information sources and voices necessary to engage in sound inquiry. This report summarizes the findings of student achievement regarding *Information Literacy* from a combination of direct evidence via an auto-graded assessment on Canvas and written artifacts scored by CPP faculty, and indirect evidence drawn from student responses to related questions on the 2023 National Survey of Student Engagement (NSSE).

Direct Evidence: Information Literacy

Methodology

In Spring 2024, the Academic Assessment Committee (AAC), along with guidance from the library, developed an online assessment/quiz to determine the information literacy skills of CPP seniors. Built in Canvas with assistance from the Center for the Advancement of Faculty Excellence, Part A of the assessment (Appendix A) involved nine multiple choice questions designed to examine students' abilities in being able to answer general questions pertaining to information literacy (e.g., choosing the proper primary source and which database to use). Part B of the assessment (Appendix B) required seniors to read an AI-generated passage on ethics related to their respective major/field of study. Students were then asked to answer open-ended questions about the author(s) of the passage, whether the references cited are legitimate, and how they ascertained the credibility of the source. While Part A was designed to assess knowledge of information literary, Part B assessed the application of information literacy knowledge. Both parts of this assessment were aligned to the criteria of the university's information literacy rubric (Appendix C). The rubric was initially developed and approved by the GE Assessment Committee in 2018, and then revised and approved by the Academic Assessment Committee in 2023.

Faculty teaching senior-level courses from each of the eight colleges were invited to participate in the assessment by integrating the assessment in their courses. Faculty assigned a combination of credit, extra credit, or no credit, resulting in a total of 291 seniors from 22 majors across seven participating colleges.

While Part A was auto-scored in Canvas, each student's response to Part B was downloaded and assigned a unique ID to maximize anonymity prior to scoring. Artifacts were also redacted of information that could be used to identify the student and faculty member (i.e., names, course titles).

The written artifacts for the open-ended questions were scored by a group of 7 faculty from three colleges and the library using the information literacy rubric. Faculty participated in a norming session to calibrate the rubric, and then independently read and scored student artifacts. Each artifact was scored by two faculty members, and artifacts with discrepancies greater than two points were scored by a third reviewer. Subsequently, means derived from all scorers for each rubric criterion were calculated for every student, with values to two decimals, with the latter value rounded down to the nearest whole number. For instance, both 2.5 and 2.7 were rounded down to 2. The rubric defined information literacy through three criteria (*Identify Voices/Sources, Locate Voices/Sources,* and *Evaluate Voices/Sources*) and four levels of performance (beginning, developing, proficient, and advanced).

Results

In addition to computing frequencies to obtain percentages for each of the rubric criteria, t-tests and chi-squares were used to compare potential differences in performance based on gender, URM status, first-generation status, and

admission type (freshman or transfer student). The chart below displays the overall percentage of students who scored at each level of achievement in each criterion of information literacy.

Information Literacy data were also collected in 2019 using a different methodology and rubric as described above. Therefore, while related, it is important to note that direct comparisons of student performance from 2019 to 2024 may be limited.

Information Literacy Assessment for Part A- Knowledge of Information Literacy Skills
Part A's assessment was designed to determine what students already knew regarding information literacy (i.e., how to identify a primary source, find the author(s), use keywords in a search, etc.). This section was auto-scored in Canvas.

"Pass/Non-pass" rates (n = 291) in Figure 1 were calculated for each rubric criterion to understand if seniors struggled with any particular rubric criterion. "Pass", indicated by the dark green bar, was defined by correct answers to all three questions in each criterion, while "Non-pass", indicated by the dark blue bar, was defined by one and/or two incorrect responses (receiving 66% or lower) in each criterion (Appendix A). While students demonstrated high "pass" rates for two of the criterion, they did not perform as well in the *Identify Voices/Sources* criterion (Figure 4). This may be due to the large number of students incorrectly answering question 3, which was included in the *Identify Voices/Sources* criterion. Appendix D details the breakdown of correct/incorrect frequencies for the questions in each criterion for those who did not receive a passing score.

Figure 1 – Percentage of Pass and Non-pass Rates by Rubric Criterion (n = 291)
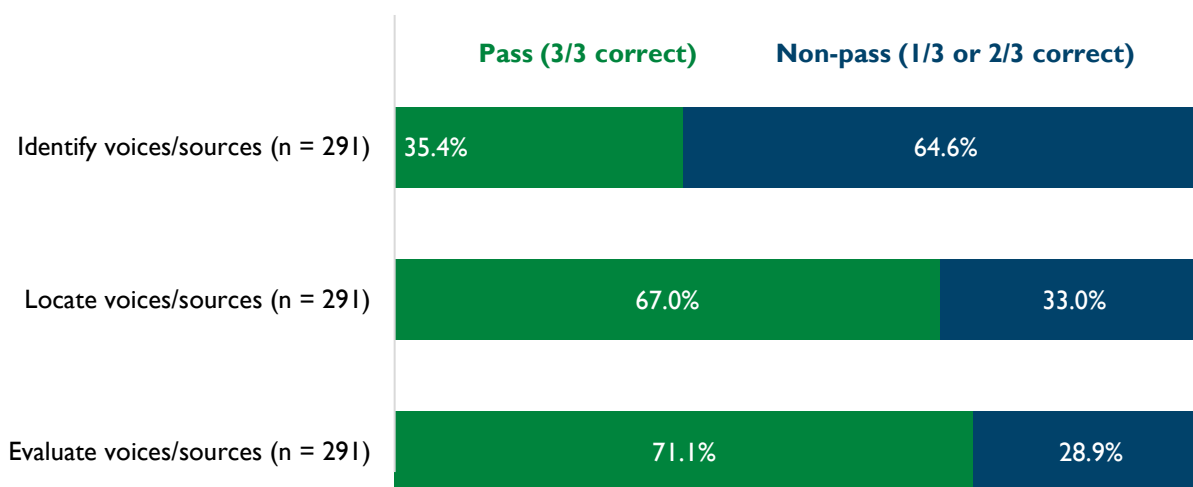

Figure E1 (Appendix E) provides further detail with a breakdown of the number of correct and incorrect responses (n = 291) for each question in Part A. There was a wide range in the percentage of students who answered questions correctly, specifically ranging from 61.9% to 97.9%. The gold bar indicates the percentage of those who answered the question(s) incorrectly, while the green bar represents those who answered the question(s) correctly. There was only one question that seniors struggled to answer correctly, which was question number 3 (Appendix A). That is, 61.9% (n=180) students answered that question incorrectly, while 38.1% (n=111) answered it correctly.

Information Literacy Assessment for Part B - Application of Information Literacy Skills
Part B of the assessment was where students applied their information literacy knowledge and skills by answering open-ended questions in response to a short narrative. These responses were scored by CPP faculty members.

It is our goal and expectation that seniors demonstrate "proficient" and "advanced" levels of information literacy by the time they graduate. Unfortunately, our 2024 results show that in students' application of information literacy skills, CPP seniors did not achieve the desired level of performance on any of the three criteria (Figure 2). The data show that while CPP seniors performed the strongest (M = 2.35) on *Identify Voices/Sources*, only 35.0% of seniors performed at the "proficient" and "advanced" levels. That is, more than half (64.9%) of seniors performed at the "beginning" and "developing" level.

Seniors also struggled with *Evaluate Voices/Sources* with 60.9% of seniors performing at the "beginning" and "developing" level. This criterion required students to evaluate how well diverse information and sources are determined to support ideas or concept.

Furthermore, 64.1% of seniors performed at the "beginning" and "developing" level for *Locate Voices/Sources. Locate Voices/Sources* pertains to the extent to which search strategies used support the assignment or purpose at hand. This criterion required students to indicate where they would look for sources pertaining to a particular topic, as well as how they would conduct a search for those sources (i.e., search terms/strategies they would use and why).

Figure 2 –   kills

	Beginning = 1	Developing = 2	Proficient = 3	Advanced = 4
Identify voices/sources (n = 290) M = 2.35	5.2%	59.7%	29.0%	6.0%
Locate voices/sources (n = 289) M = 2.32	8.0%	56.1%	30.1%	5.9%
Evaluate voices/sources (n = 287) M = 2.22	26.1%	34.8%	27.2%	11.8%
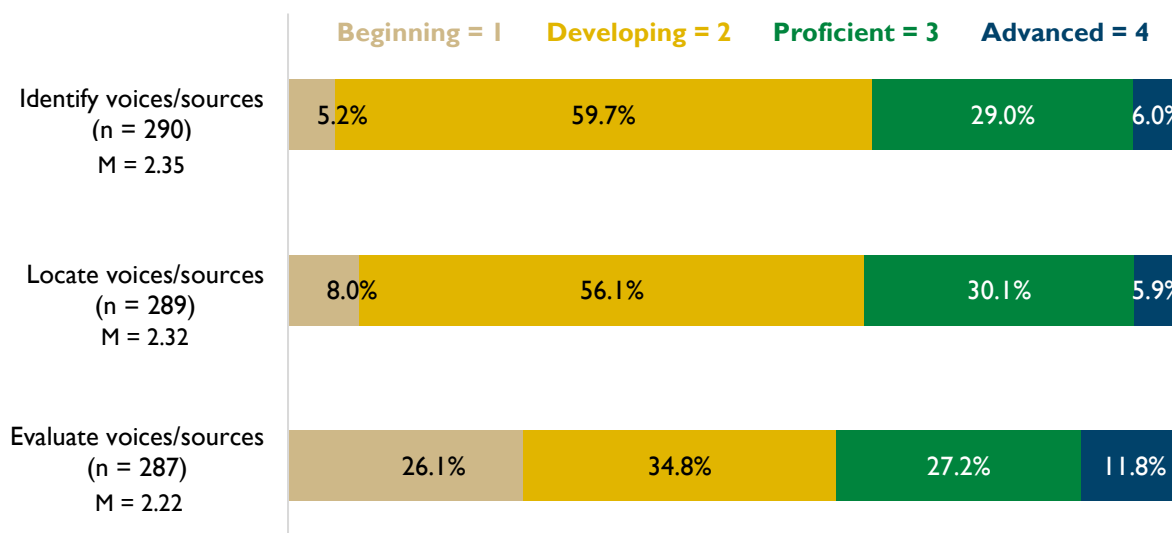
Information Literacy by Demographic Group
Additional analyses comparing mean differences (Part B responses) and categorical variables (Part A responses) were conducted to examine student performance by key demographic characteristics. That is, under-represented minority (URM) status[1], generation status (first-generation and continuing-generation)[2], gender, and admit type were used in the analyses. The results for Part B revealed there were statistically significant differences for generation status. Specifically, students who were first-generation did not perform as well as the continuing-generation students on *Evaluate Voices/Sources*.

The figures in Appendix F display the percentage of seniors by demographic characteristics and their respective performance in each criterion.

Indirect Evidence: National Survey of Student Engagement (NSSE)

Indirect assessment allows us to infer students' skills and knowledge through methods such as surveys, focus groups, and interviews. CPP uses the National Survey of Student Engagement (NSSE) to better understand student perception of their improvements and confidence levels in relation to key learning outcomes. Considering that CPP seniors achieved desired performance levels in all three Information Literacy criteria, self-reported evidence from NSSE findings can offer valuable additional insight.

[1] URM status includes students who identify as American Indian/Alaska Native, Black or African American, and Hispanic/Latino.
[2] A continuing-generation college student is defined as an undergraduate who has at least one parent with a bachelor's degree or higher.

Methodology

As part of CPP's commitment to ensuring educational experiences that foster student learning and success, CPP participated in the NSSE in Spring 2023. With a response rate of 21%, this survey collected information from 1,218 first- and senior-year students regarding their participation in various educational practices. NSSE scores serve as complementary indirect evidence of student learning concerning written communication. In addition, as a national survey, benchmark data from comparative institutions is provided to add more nuanced context.

Results

CPP seniors were asked to reflect on how often their coursework emphasized evaluating a point of view, decision, or information source. Seniors felt that their coursework emphasized information literacy components "Quite a Bit." Although CPP seniors were on par with the comparison groups that participated in NSSE, there was little to no difference between CPP first-year students and seniors.

During the current school year, how much has your coursework emphasized:					
1 = Very little, 2 = Some, 3 = Quite a bit, 4 = Very much		Mean Response			
		CPP	CSU	Master's L	NSSE TOTAL
Evaluating a point of view, decision, or information source?	FY	2.9	2.9	2.9	2.9
	SR	3.0	3.0	3.0	3.0

Summary and Discussion

Information literacy skills are crucial for all students due to their important role in one being able to make informed decisions free of misinformation in their everyday lives and workplace as lifelong learners. This skill is becoming more imperative, as information is readily available at one's fingertips in many formats; consequently, students must harbor the skillset needed to not only critically evaluate the veracity and authority of sources, but also to use the information properly in order to be knowledgeable citizens. In fact, information literacy skills remain one of the top-ranked skills required by college graduates to succeed in the workforce, according to AAC&U's 2020 survey of employers[3].

CPP's direct assessment of student work revealed that our seniors did not meet performance expectations in all three of the criteria used to assess information literacy. Even though CPP seniors possessed information literacy knowledge (Part A results), application of that knowledge (Part B results) told a different story.

NSSE findings add further dimension to CPP's direct assessment of information literacy. CPP seniors were on par with all the comparison groups; however, there was little to no difference between CPP first-year students and seniors. Campitelli and Gobet (2011) asserted that repetition of an activity is a necessary contributing factor in improving performance. Although our seniors indicated that their coursework emphasized information literacy skills "Quite a Bit", it potentially contradicts the students' overall performance, as the assessment data revealed that CPP seniors have room for improvement with more than half of CPP seniors not meeting the expected levels of performance.

Approximately one-third of CPP seniors met expectations for each Information Literacy criteria. When examining mean differences based on demographic characteristics (i.e., gender, URM status, generation status, and admit type), there was only a statistically significant difference based on generation status regarding the criterion *Evaluate Voices/Sources*. As students did not meet our established standard of performance, we must thoughtfully take actions to improve student learning and performance, and ask ourselves what strategies we should implement to raise information literacy skills, especially for first-generation students.

As we consider these results in light of the elements of an inclusive polytechnic university, it is appropriate to consider the degree to which we incorporate instruction and scaffolding of information literacy skills across the curriculum and co-curriculum. For instance, to what extent do we expect individual degree programs to build on and advance information literacy skills in upper-division program courses? Bernard (2024) not only demonstrated that integrating information literacy into the curriculum improved students' knowledge of information literacy, but it also had a positive impact on how

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[3] https://dgmg81phhvh63.cloudfront.net/content/user-photos/Research/PDFs/AACUEmployerReport2021.pdf

students perceived those abilities. Additionally, Bernard stated it is key to start integrating this skillset early on in one's higher education curriculum, preferably their first year, so they have time to further develop their skills and self-efficacy in being information literate adults.

Given the advances in artificial intelligence (AI), James and Filgo (2023) discuss the growing importance of information literacy skills, and that as the use of ChatGPT increases by students, it will become more imperative that students learn to evaluate whether information they are given is authoritative within the context of their research. Furthermore, since ChatGPT uses predictive language modeling, the information it compiles comes across as natural language, not necessarily factual. This is problematic when students use AI for help with research, as AI sometimes complies lists of reputable-sounding articles that do not actually exist. James and Filgo stated that this can be an opportunity to not only teach students proper citation usage as part of information literacy skills, but also to show the potential downside of reliance on AI as a source instead of as learning tool. This is further affirmed by Bowen and Watson's suggestion that AI literacy be added as a critical skill for future success (2024).

Improving Student Learning

Discussing this report with faculty and/or key staff (e.g., academic advisors, career advisors) in your program may help determine program-level actions needed to improve student achievement in the Information Literacy learning outcome. If degree programs have evidence of learning for a related outcome, it may be useful to consider those results as part of discussion to improve student learning.

The following questions may be useful in guiding discussions:

- For which components/criteria of Information Literacy do students demonstrate satisfactory levels of achievement? How do students in your program compare?

- For which components/criteria of Information Literacy do you feel students need to improve?

- What types of assignments are used in your program to develop student's ability to apply and further develop their information literacy skills to engage in sound inquiry?
    - Are there ways to include scaffolded assignments where students can actively engage in exercises to further develop their ability to identify sources/voices?
    - Do you have your class attend workshops at the CPP library or invite your subject librarian to speak with your class?
    - Has your class participated in citation modules hosted by the CPP library?

- What are some course or program modifications that may facilitate student learning in the necessary information literacy skillset to strengthen the components/criteria you identified as needing improvement? While not an exhaustive list, typical categories of changes made as a result of assessment evidence may include:
    - Curriculum (e.g., adequacy of courses, course sequencing, etc.)
    - Pedagogy (e.g., more assignments where students can build upon their abilities to become information literate, provide scaffolded assignments or prompts to ensure students acquire the skills, dedicate a specific amount of class time to a skill identified as needing improvement, incorporate a class activity to enhance student learning, etc.)

- Wang (2011) offers some suggestions regarding how to integrate information literacy into the higher education curriculum:
    - Extra-curriculum: a course outside of the academic curriculum
    - Inter-curriculum: a session(s) added onto an academic course
    - Intra-curriculum: integrated into a course
    - Stand-alone: an independent course(s) within an academic curriculum

- What recommendations do you have for CPP to improve students' information literacy skills?

We recommend keeping a record of the decisions your program makes about the evidence, and the actions taken to improve Information Literacy skills. This information may be useful when completing future assessment reports and program review/accreditation self-studies.

References

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Bowen, J.A., & Watson, C.E. (2024). *Teaching with AI: A Practical Guide to a New Era of Human Learning.* Johns Hopkins University Press.

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Wang, L. (2011). An Information Literacy Integration Model and Its Application in Higher Education. *Reference Services Review, 30*(4), 703-720. https://doi.org/10.1108/00907321111186703

Appendix A

<div style="background:black;color:white">**PART A: MULTIPLE CHOICE GENERAL QUESTIONS**</div>

Rubric Criteria: Identify Voices/Sources

1. **You need a primary source giving a firsthand account of the sinking of the RMS Titanic in 1912, which of the following options is likely to provide you with that source?**
    a. <u>A newspaper article about the sinking published a day after it occurred.</u>
    b. A book commemorating the 100th anniversary of the Titanic's sinking.
    c. *Titanic,* the feature film directed by James Cameron, released in 1997.
    d. A video documentary about the discovery of the wreck of the Titanic in 1985.
2. **You need a scholarly source that discusses the effects of vehicle emissions standards on air pollution, which of the following options is likely to provide you with that source?**
    a. A news article.
    b. A blog post on a website devoted to green energy.
    c. <u>A journal article from a Library Database</u>
    d. A video on YouTube from the U.S. Environmental Protection Agency.

3. **You are looking for a basic overview of food insecurity in order to better understand the topic and find a topic for research in that area. Which of the following options will be most likely to provide you with that information?**
    a. A news article about the most recent conflict in the area published in the *New York Times*.
    b. A scholarly article on a specific aspect of this conflict in a library database.
    c. <u>An encyclopedia article discussing the conflict.</u>
    d. A post on X (formerly known as Twitter)

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Rubric Criteria: Locate Voices/Sources

4. **Identify the keywords in the following query that could be used in a keyword search of a database: "What regions of the United States are experiencing population growth**?"
    a. What, regions, of, the, United States, are, experiencing, population, growth
    b. <u>Regions, United States, population growth</u>
    c. What, of, the, are
    d. Regions, experiencing, population growth

5. **You need to find statistics on how many people in Pomona currently have an income below the Federal Poverty Line. Which of the following sources of information would contain that information?**
    a. A scholarly article published in 2008.
    b. A book about Pomona published in 1997.
    c. The City of Pomona's Wikipedia page.
    d. <u>https://data.census.gov</u> (a government website containing census data)

https://maps.latimes.com/neighborhoods/index.html

6. **You are looking for peer-reviewed articles on the effectiveness of treatments for insomnia. Which of these databases (subscribed to by the University Library) would be your best choice for finding those articles?**
   a. OneSearch, the Library's search engine, with access to the library catalog and article databases.
   b. <u>PubMed, a subject-specific database with articles from journals in the discipline of medicine.</u>
   c. Compendex/Engineering Village, a multi-subject database with articles from journals in the engineering disciplines.
   d. Global Newsstream, a database of news articles.

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Rubric Criteria: Evaluate Voices/Sources

7. **In a general sense, what are we asking about when we ask if the creator of a source has "authority"?**
   a. Is the creator of the source popular?
   b. Is the creator of the source powerful?
   c. <u>Does the creator of the source know what they're talking about?</u>
   d. How many followers does the creator of the source have on social media?

8. **A person with a Ph.D. in Engineering makes a sociological argument with long-term policy implications. Would this argument be considered as authoritative as an argument made by a person with a Ph.D. in Sociology?**
   a. Yes, because a Ph.D. in one field can be an authority in another field.
   b. Maybe, because a Ph.D. in any field has the training to learn about any complex topics.
   c. <u>No, specialized authority in a specific field is not transferrable to another field.</u>

9. **How is accuracy ensured in academic publishing?**
   a. It isn't. Professors just publish whatever they want to.
   b. Scholars pay a fee to fact-checking services who approve their work.
   c. The Bureau of Accuracy in Research approves all new scholarship.
   d. <u>Articles submitted for publication in scholarly journals are submitted to the peer review process.</u>

Appendix B

PART B: OPEN-ENDED QUESTIONS SPECIFIC TO PROVIDED NARRATIVE

<Discipline-focused short narrative here>

Identify Voices/Sources:
- List the author's names for each of the sources used in this paper.
- What types of sources were used to back up the arguments made in this paper? E.g., are they popular sources or scholarly sources? How can you tell?

Locate Voices/Sources:
- If you were asked to write a paper on this subject, where would you look for sources? Why?
- How would you search for these sources? E.g., what search terms/strategies would you use? Why?

Evaluate Voices/Sources:
- Please response to the following question as it pertains to this source.
- Is this a real/legitimate source?
- Where was this source published?
- Explain how the author(s) is/are qualified to support the idea(s) in this paper?

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Appendix C

INFORMATION LITERACY RUBIC (APPROVED BY ACADEMIC ASSESSMENT COMMITTEE)

Learning Outcome: Information Literacy: Students will responsibly identify, locate, and critically evaluate the array of information sources and voices necessary to engage in sound inquiry.
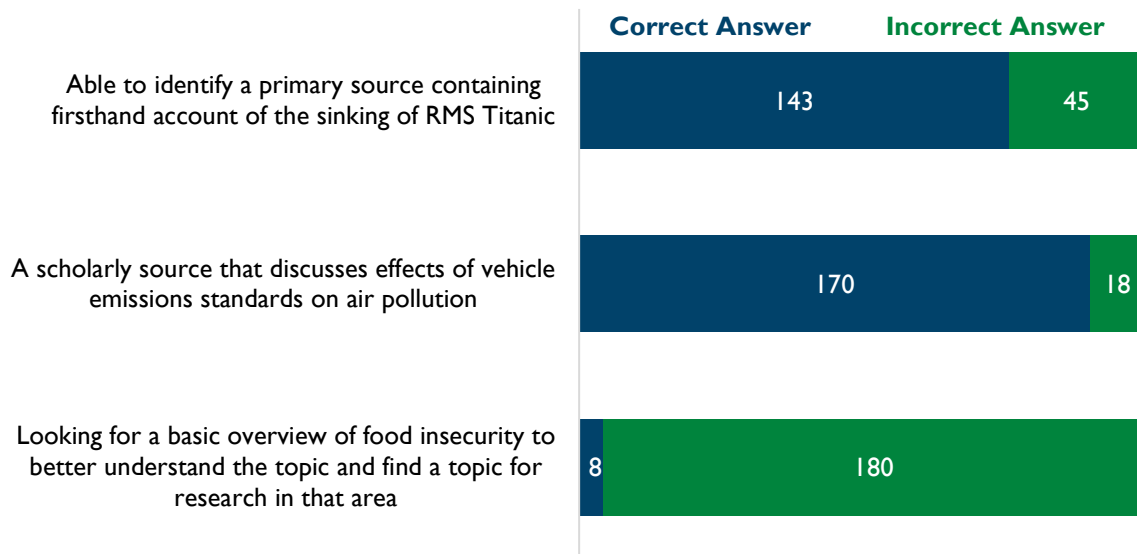
Criteria	Advanced (4)	Proficient (3)	Developing (2)	Beginning (1)
Identify voices/sources *How well sources and their parts are singled out for the purpose at hand.*	The types of information and sources selected directly relate to the purpose or concepts at hand.	The types of information and sources selected have some direct relationship to the purpose or concepts at hand.	The types of information and sources selected have minimal relationship to the purpose or concepts at hand.	The types of information and sources selected have no relationship to the purpose or concepts at hand.
Locate voices/sources *The extent to which search strategies used support the assignment or purpose at hand.*	Accesses information using effective, well-designed search strategies (e.g., search terms, databases, library resources, etc.), and are highly appropriate.	Accesses information using broad search strategies and some relevant/appropriate information sources. Demonstrates ability to refine search.	Accesses information with limited/mildly-relevant search strategies; retrieves information that partially addresses inquiry. Limited ability to refine search.	Accesses information randomly; retrieves information that lacks relevance and quality.
Evaluate voices/sources *How well diverse information and sources are determined to support ideas or concept*	Thoroughly analyzes and discerns the credibility of personal and others' assumptions; evaluates the relevance of varying contexts when presenting a position or perspective.	Identifies the credibility of personal and others' assumptions; may occasionally miss subtle biases or perspectives.	Identifies personal and other assumptions and some relevant contexts but cannot effectively present their position	Shows limited/emerging awareness of present assumptions (sometimes labels assertions as assumptions). Often fails to identify some contexts when presenting a position.
Optional: Assignment-dependent				
Use of information and sources in inquiry *How well sources are used to reflect established standards*	Demonstrates detailed attention to and successful execution of bibliographic and in-text citations according to discipline and purpose.	Demonstrates attention to and important bibliographic and in-text citations according to discipline and purpose. Contains minor errors.	Limited use of bibliographic and in-text citations according to discipline and purpose. Contains noticeable errors.	No attention to bibliographic and in-text citations. Contains significant errors.

Appendix D

"Pass" was defined by correct answers to all three questions in each criterion, while "Non-pass" was defined by one and/or two incorrect responses (receiving 66% or lower) in each criterion. The following three figures the breakdown of correct/incorrect frequencies for the questions in each criterion for those who did not receive a passing score.

Figure D1 shows the breakdown of questions for those who received "Non-pass" for the criterion *Identify Voices/Sources* (n = 188). Of the 188 seniors who received "Non-pass", 143 seniors answered question 1 correctly, while 45 seniors answered it incorrectly.

Figure D1 – Questions missed for "Non-pass" Scores - *Identify Voices/Sources*

	Correct Answer	Incorrect Answer
Able to identify a primary source containing firsthand account of the sinking of RMS Titanic	143	45
A scholarly source that discusses effects of vehicle emissions standards on air pollution	170	18
Looking for a basic overview of food insecurity to better understand the topic and find a topic for research in that area	8	180

Breakdown of questions for those who did not pass the rubric criterion *Locate Voices/Sources* (n = 96) is detailed in Figure D2. Of those 96 seniors who received "Non-pass" for *Locate Voices/Sources*, 12 of them answered question 4 incorrectly.

Figure D2 – Questions missed for "Non-pass" Scores – *Locate Voices/Sources*

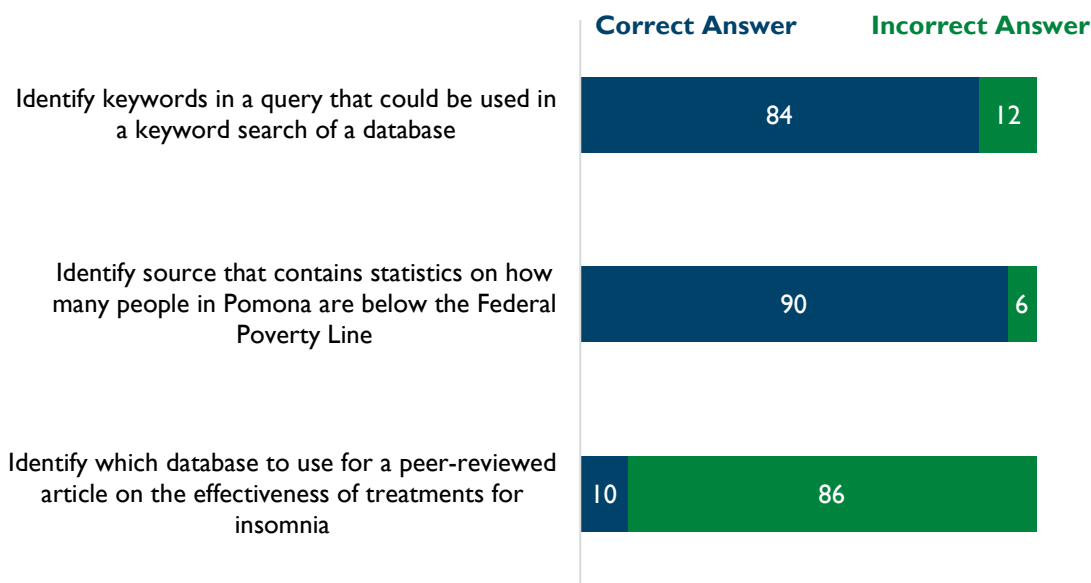|	Correct Answer	Incorrect Answer
Identify keywords in a query that could be used in a keyword search of a database	84	12
Identify source that contains statistics on how many people in Pomona are below the Federal Poverty Line	90	6
Identify which database to use for a peer-reviewed article on the effectiveness of treatments for insomnia	10	86

Figure D3 shoes the breakdown of questions for those who did not pass the rubric criterion *Evaluate Voices/Sources* (n = 84). Of those 84 seniors who received "Non-pass" for *Evaluate Voices/Sources*, 23 of them answered question 7 incorrectly.

Figure D3 – Questions missed for "Non-pass" Scores - *Evaluate Voices/Sources*

	Correct Answer	Incorrect Answer
What is being asked when we ask if the creator of source has authority	61	23
Ph.D. in Engineering makes a sociological argument with policy implications. Is this argument as authoritative as an argument made by a person with a Ph.D. in Sociology	27	57
How is accuracy ensured in academic publishing	69	15
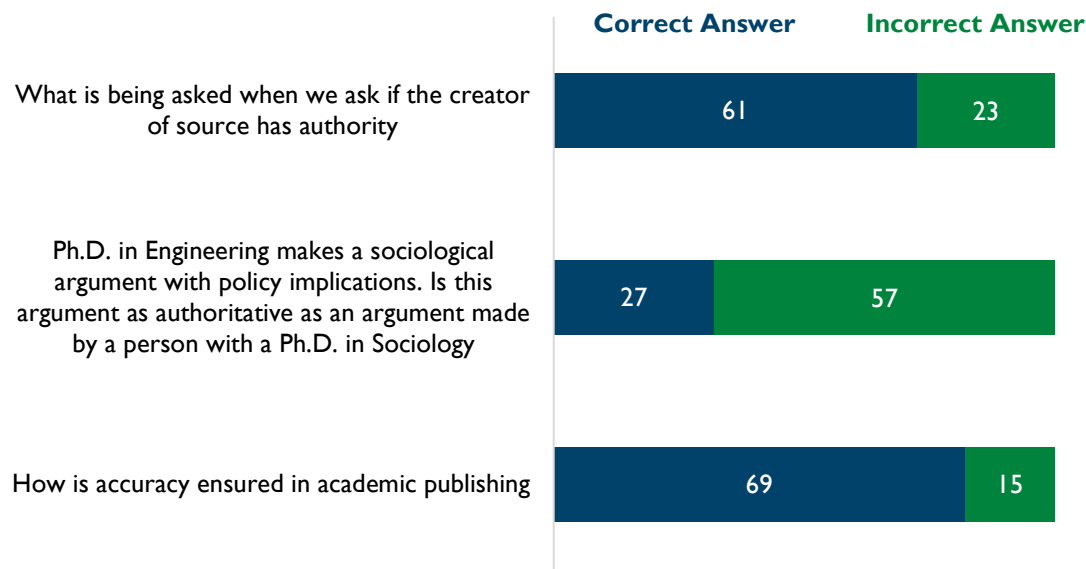
Appendix E

Figure E1 – Count of Correct and Incorrect Answers by Question for Part A (n = 291)

| Question	**Correct Answer**	**Incorrect Answer**
Able to identify a primary source containing firsthand account of the sinking of RMS Titanic	84.5%	15.5%
A scholarly source that discusses effects of vehicle emissions standards on air pollution	93.8%	6.2%
Looking for a basic overview of food insecurity to better understand the topic and find a topic for research in that area	38.1%	61.9%
Identify keywords in a query that could be used in a keyword search of a database	95.9%	4.1%
Identify source that contains statistics on how many people in Pomona are below the Federal Poverty Line	97.9%	2.1%
Identify which database to use for a peer-reviewed article on the effectiveness of treatments for insomnia	70.4%	29.6%
What is being asked when we ask if the creator of source has authority	92.1%	7.9%
Ph.D. in Engineering makes a sociological argument. Is this argument as authoritative as an argument made by a Ph.D. in Sociology	80.4%	19.6%
How is accuracy ensured in academic publishing	94.8%	5.2%

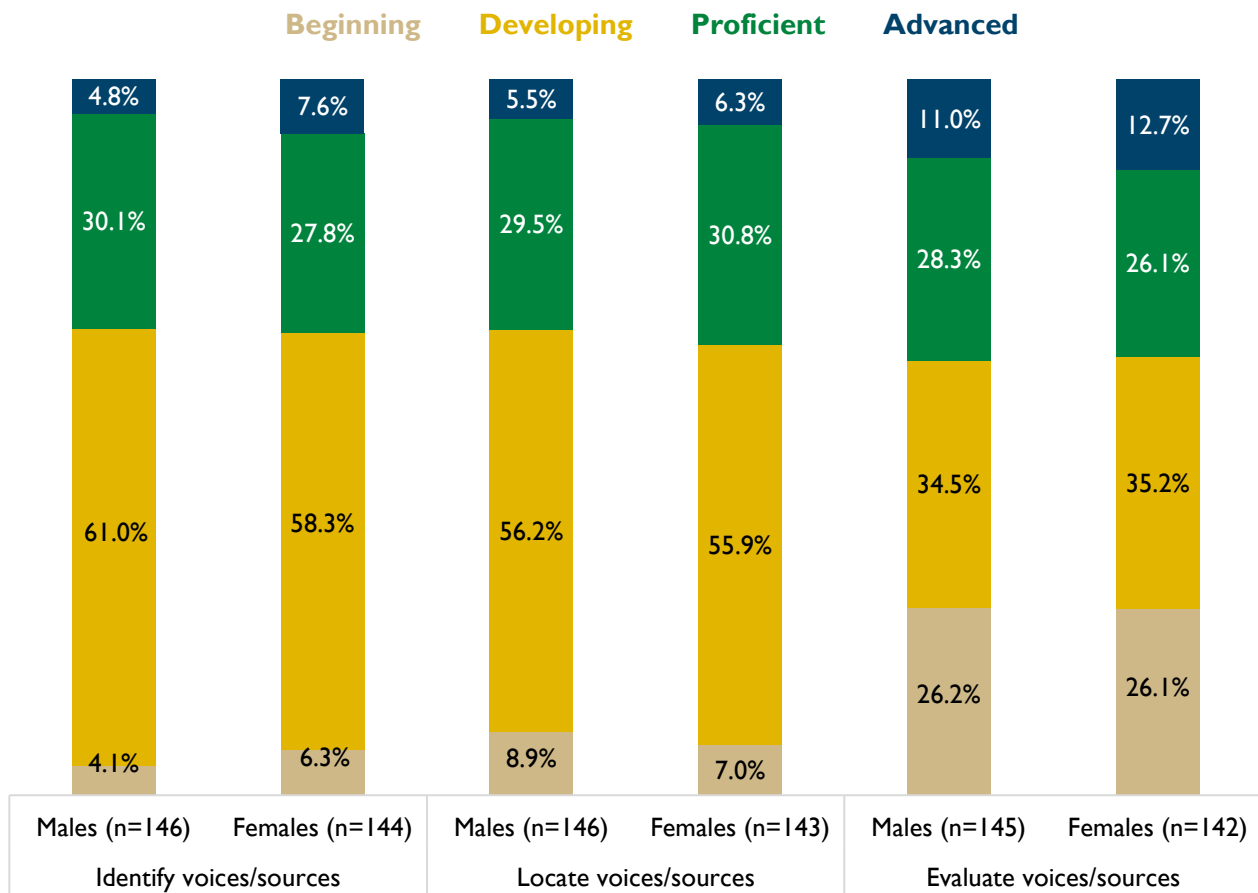Figure F1 – Information Literacy by URM Status for Part B
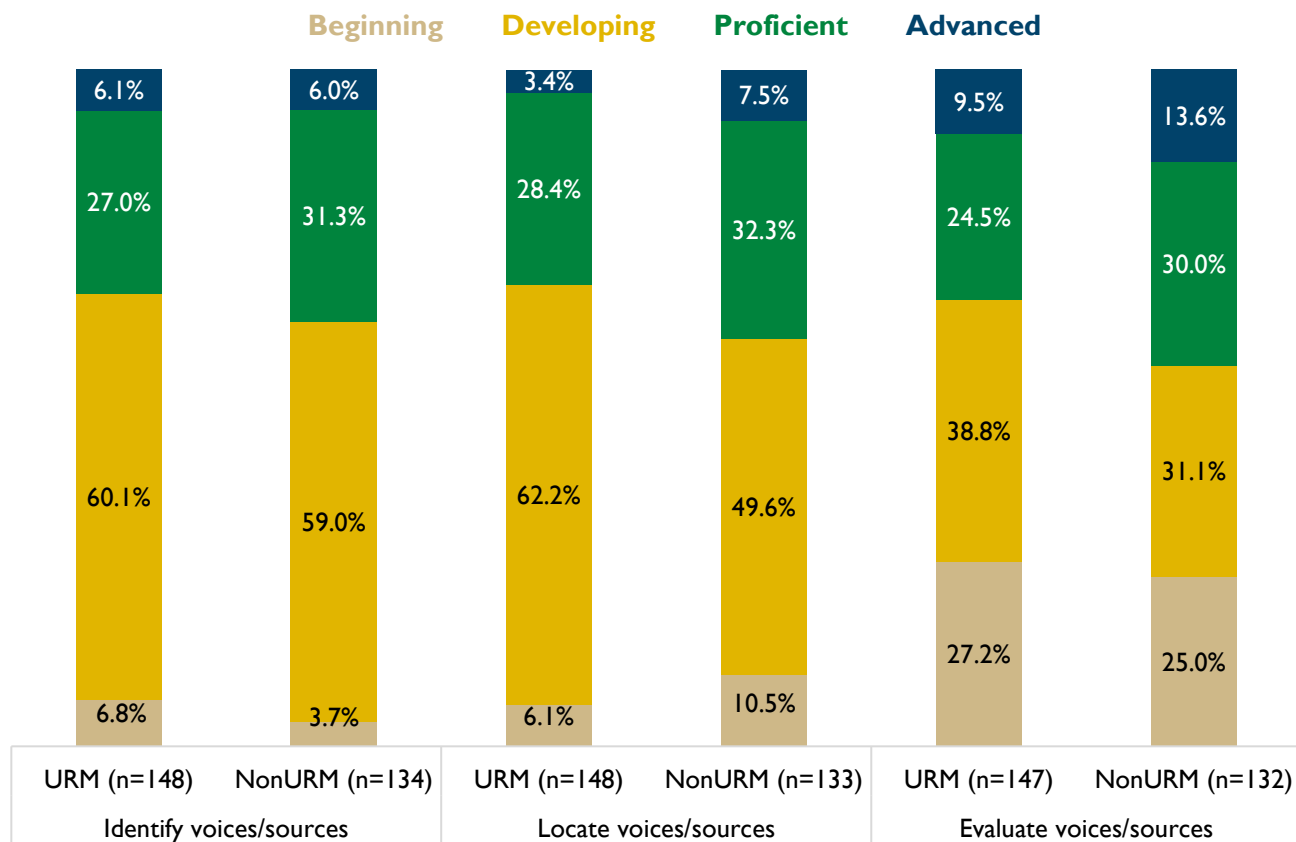
Note: No statistically significant differences were found for any of the criterion.

Figure F2 – Information Literacy by Generation Status for Part B
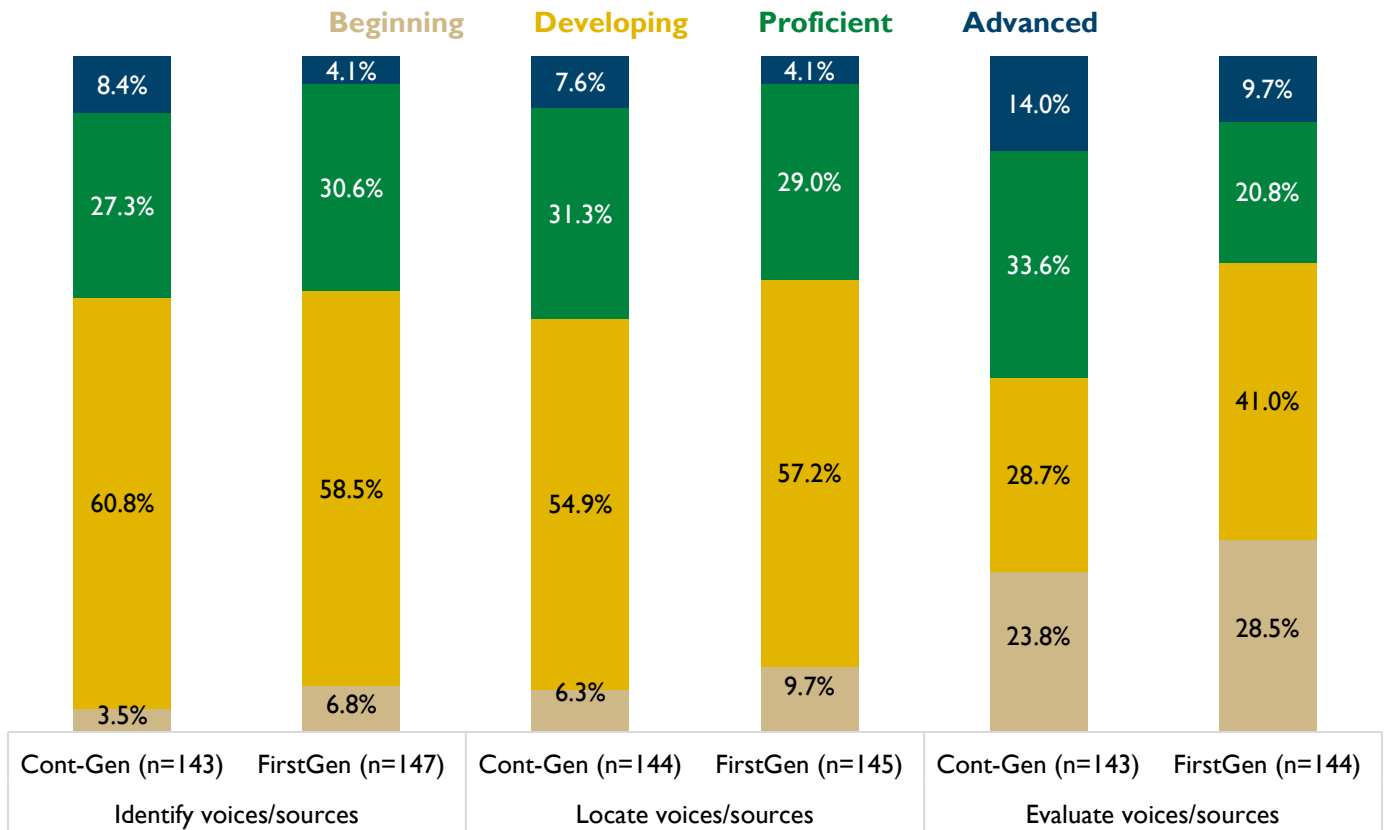
Note: Statistically significant differences were found for the *Evaluate Voices/Sources* criterion.

Figure F3 – Information Literacy by Gender for Part B

Beginning **Developing** **Proficient** **Advanced**

4.8%	7.6%	5.5%	6.3%	11.0%	12.7%
30.1%	27.8%	29.5%	30.8%	28.3%	26.1%
61.0%	58.3%	56.2%	55.9%	34.5%	35.2%
				26.2%	26.1%
4.1%	6.3%	8.9%	7.0%		

Males (n=146)	Females (n=144)	Males (n=146)	Females (n=143)	Males (n=145)	Females (n=142)
Identify voices/sources		Locate voices/sources		Evaluate voices/sources	

Note: No statistically significant differences were found for any of the criterion.

Figure F4 – Information Literacy by Admit Type for Part B
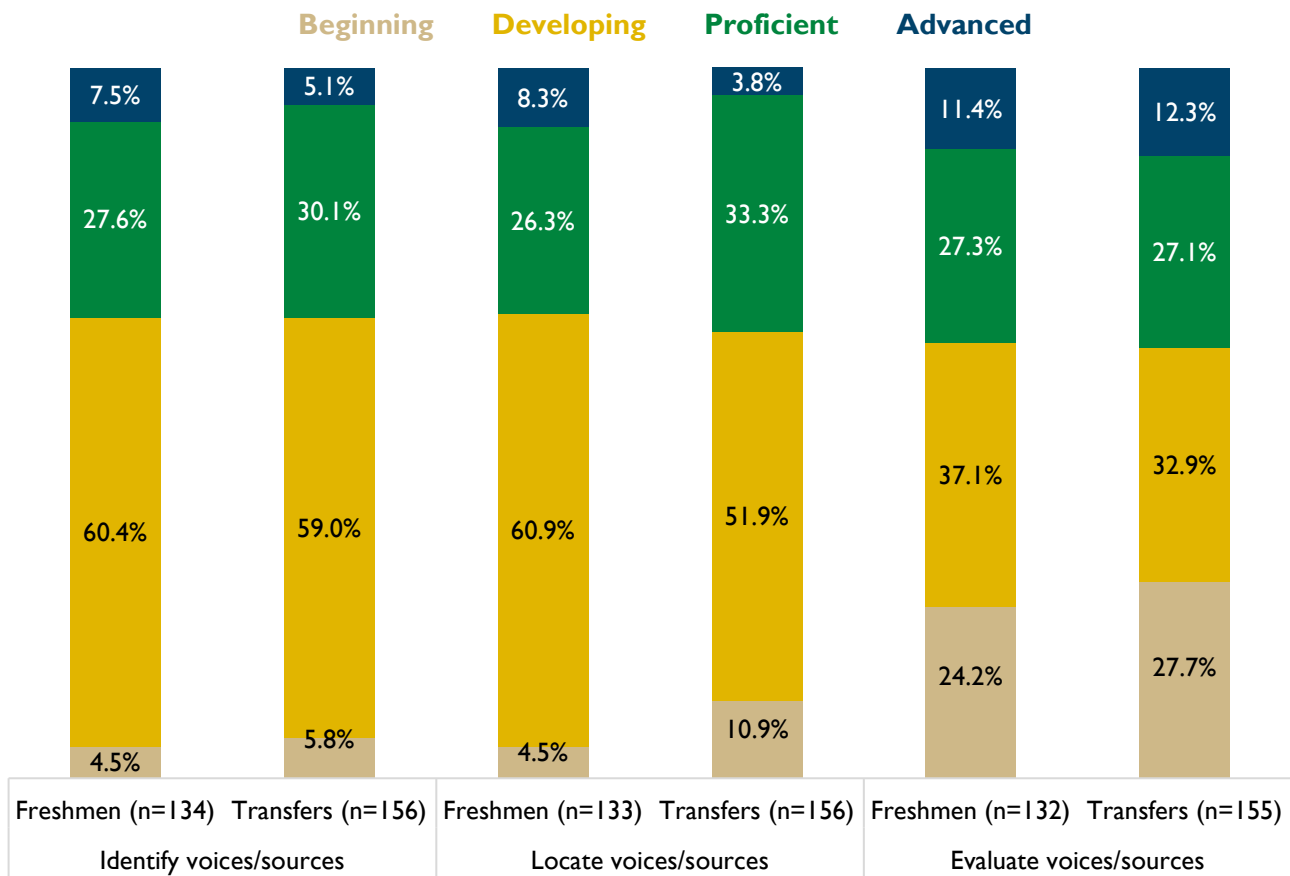
Note: No statistically significant differences were found for any criterion.