

# Evaluating Information Literacy Skills of Writing 10 Students

## Outline

1. Background
2. Questions of Interest
3. Cautions & Considerations
4. Overall Analysis Part 1: Comparing Results from the Pre and Post-Questionnaires
5. Overall Analysis Part 2 Findings from the Post-Questionnaire Based on Respondent Groups (In-Person Instruction and Online Tutorial Instruction)
6. Significant Responses: Post-Questionnaire
7. Additional Observations: Post-Questionnaire
8. Graphs 1-33: Compare Pre-Questionnaire and Post-Questionnaire Responses
9. Graphs 41-77: Compare Post-Questionnaire Responses between In-Person and Online Respondent Groups

## Background:

In spring 2010, the library distributed both a pre-questionnaire and post-questionnaire/survey to nine Writing 10 sections through their individual instructors. These four instructors (Hundley, Ramirez, Trook, and Walker) kindly volunteered to participate in this study at the request of Writing lecturer Mary Soltis. Each instructor had two Writing 10 sections with the exception of one Writing instructor who had three for a total of nine participating sections.

Students in each section completed the pre-questionnaire (early to mid-February) and completed the post-questionnaire near the end of the semester (end of April and beginning of May). During the semester, between the pre-questionnaire and post-questionnaire, Writing 10 students received library instruction.

Five of the nine sections received in-person library instruction while the remaining four sections received online library instruction through the Research for Success tutorial series created by UC Merced librarians. The same librarian taught all in-person sessions for those sections involved in the study in order to minimize instructional differences that could occur if different librarians taught the sessions. For the online tutorials, students came to the library to complete them. A librarian gave a brief introduction and ensured that all students were able to view and listen to the tutorials before leaving the students to complete the tutorials independently. Usually the Writing lecturer remained with the students or a library student assistant stayed in the room to provide any needed technical troubleshooting.

The pre-questionnaire (40 questions) and post-questionnaire/survey (80 questions) included the same questions from 1 through 40. The first 33 questions were knowledge and skill based questions designed to test specific outcomes (e.g. Students will be able to understand the concept of truncation.) Questions 34 – 40 asked students some demographic and affiliation questions. The post-questionnaire/survey included an additional 40 questions to determine respondent satisfaction level with the type of instruction they received and to discover the information finding behaviors they engaged in to complete Writing 10 assignments.

Writing lecturers used class time to allow students to complete both the pre-questionnaire and post-questionnaire survey.

In total, 143 students completed the pre-questionnaire and 126 students completed the post-questionnaire. We did not use any identifying information and did not track individual students from the pre to post-questionnaire. Data from students who did not give consent is not included in

the results. We had IRB approval to conduct the study.

Of those who completed the post-questionnaire, 71 self-identified as having received in-person library instruction, 35 self-identified as receiving online library instruction, and 20 indicated that they had not received any library instruction.

Using a paper survey greatly increased our participation in contrast to our previous attempts to administer similar questionnaires in an online environment. However, administering the questionnaires via paper did pose some drawbacks in the ease and flexibility of data gathering. We also suspect it contributed to less accurate data than we had hoped to collect. See "Cautions & Considerations" for details.

We used UCSB Social Science Center's services for calculations (percentages and cross-tabs) and some brief analysis.

### **Questions of Interest:**

As part of this study we wanted to explore some of the following questions:

Is there a change in student's information literacy skills from the beginning of Writing 10 to the end of Writing 10?

- As a group, respondents in the post-questionnaire group scored better than the respondents who complete the pre-questionnaire suggesting that student's information literacy skills did improve in Writing 10. [See Overall Analysis: Part I]
- Improvement between the pre-questionnaire and post-questionnaire results was obvious for some questions such as q14 which asked students what Boolean operator to use to join search terms together. Yet post-questionnaire responses were sometimes disappointing and even lower than pre-questionnaire responses for other questions. For example, in q20 a lower percentage of respondents answered correctly in the post-questionnaire than in the pre-questionnaire when asked to identify the appropriate limiter for a search which yielded over 1000 results.

Are there are differences in information literacy skills and/or information seeking behavior between WRI 10 students who receive library instruction in-person versus WRI 10 students who receive library instruction online?

- In the post-questionnaire, WRI 10 respondents who received in-person instruction (n=71) scored higher results than those respondents who had received online instruction (n=35). Students who received in-person instruction seem more likely to take advantage of library services and resources than those who received online instruction. [See Overall Analysis: Part II and Observations: Post-Questionnaire]

What information seeking behaviors are students taking in order to find resources for their Writing 10 writing assignments?

- Even with library research instruction, students are much more likely to search web search engines than they are to search library resources such as Academic Search Complete or Next Generation Melvyl pilot catalog. However, approximately 76% of students reported finding full-text articles through the UC Merced Library's online databases which they used for their Writing 10 papers. [See graphs for questions 41-49.]

**Cautions & Considerations:**

The individual at UCSB who analyzed our findings cautioned us that some factors may have influenced the findings making them less reliable than they could be:

- The first 33 questions on both the pre-questionnaire and post-questionnaire instruments were the same which may have influenced the results e.g. Students have seen the same questions before. [We have received differing opinions on this.]
- The testing environments such as time of day, place of administration were different for the groups and could have affected the results.
- It is not possible to determine if individual test scores increased since we did not track individual IDs across pre and post-questionnaires. [There were 143 respondents for the pre-questionnaire and 126 respondents for the post-questionnaire.] This design makes the results less definitive. We had tracked individuals in previous attempts through online surveys. In the online environment it was easier to track individuals while maintaining privacy.
- In the post-questionnaire, there are uneven sample sizes (71 in-person, 35 online, 20 no instruction). In addition, outliers (extremely high or low scores) in small samples have a greater influence on the means/averages and do not necessarily give an accurate reflection of the group.

After analyzing the results sent to us from UCSB, we made another discovery. We were personally surprised by the uneven sample sizes since *five* of the sections received in-person instruction and *four* sections received online instruction. Upon further inspection, we discovered that students did not always correctly self identify the type of instruction they received. This could have occurred because they did not read question 69 carefully, which asked students to self-identify the type of instruction they received, and/or students thought that coming to the library to take the online tutorials still counted as in-person instruction. Our design relied on student answers rather than assigning the type of instruction based on a section number, so we could not re-run the numbers and ensure that we would have the accuracy we desired.

- Unfortunately this not only adds to uneven sample sizes, but we suspect that a number of students who received online library instruction identified themselves as having received in-person library instruction.

In spite of these cautions and considerations, we have graphed most of the results and forwarded some analysis. However, we realize that these results lack the confirmation and validity we had attempted to achieve. Please review these results with those cautions in mind.

Note: We did not graph the demographics data (post-questionnaire #34-40) or summarize the comments (post-questionnaire #78-80).

**Overall Analysis:****Part 1: Comparing Results from the Pre and Post-Questionnaires**

As a group, WRI 10 respondents obtained higher scores at the end of the semester after receiving library instruction than they did before receiving library instruction.

**Table 1a: Group Statistics**

	N	Mean	Std. Deviation	Std. Error Mean
Group 1	143	23.38	6.048	.506
Group 2	126	25.96	6.826	.608

As noted in Table 1a on average, student respondents scored approximately 2.5 more points in the post-questionnaire than they did in the pre-questionnaire.

**Table 2a: Independent Samples Test**

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	1.402	.237	-3.27	267	.001	-2.57	.785	-4.12	-1.03
Equal variances not assumed			-3.25	251.71	.001	-2.57	.791	-4.13	-1.01

Table 2a reports the results from an independent sample t-test. Results from the t-test indicate that there is a significant difference between the two groups ( $p$ -value = .001).

Note: a t-test assesses whether the means (averages) of two groups are *statistically* different from each other.

Note: a P value, a percentage of confidence, of .001 means that the researcher is 99.9% sure that the results are correct and not due to a random chance of error.

Finally, Figure 1a displays the size effects between the two groups. A Cohen's  $d$  of .91 was found. This indicates a large size effect between the two groups. In simple language, this means that there is a large difference between the means/averages of the two groups (pre-questionnaire to post-questionnaire).

**Figure 1a: Size Effects**

Cohen's $d$	Effect-size $r$
0.91	0.41

Cohen's  $d$  (standardized difference between two means) is one measure of effect size

$R = 0.10$  (small effect);  $r = 0.30$  (medium effect);  $r = 0.50$  (large effect)

From "effect size." *Encyclopaedic Dictionary of Psychology*. Abingdon: Hodder Education, 2006. *Credo Reference*. Web. 21 January 2011.

## Part 2: Findings from the Post-Questionnaire Based on Respondent Groups (In-Person Instruction and Online Tutorial Instruction)

The in-person group (n=71) and online group (n=35) did not differ significantly from the group with no instruction (a small sample of 20 respondents). Yet, the WRI 10 respondents who received in-person instruction obtained higher scores (an average of 4.1 points higher) than those who received online tutorial instruction.

**Table 1b: Group Statistics**

	N	Mean	Std. Deviation	Std. Error Mean
In-person class	71	27.37	6.035	.716
Online library research tutorials	35	23.27	8.193	1.385

Table 2b reports the results from an independent sample t-test. Results from the t-test indicate that there is a significant difference between the two groups (p-value = .045).

Note: a t-test assesses whether the means (averages) of two groups are *statistically* different from each other.

Note: a P value, a percentage of confidence, of .045 means that the researcher is 95.5% sure that the results are correct and not due to a random chance of error.

**Table 2b: Independent Samples Test**

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	4.134	.045	2.914	104	.004	4.102	1.408	1.310	6.894
Equal variances not assumed			2.631	52.790	.011	4.102	1.559	.974	7.229

Finally, Figure 1b displays the size effects between the two groups. A Cohen's *d* of .57 was found. This indicates a moderate size effect between the two groups. In simple language, this means that there is a moderate difference between the means/averages of the two groups (in-person and online).

**Figure 1b: Size Effects**

Cohen's <i>d</i>	Effect-size <i>r</i>
0.57	0.27

### Significant Responses: Post-Questionnaire

Based on calculations (crosstabs with chi-square) from the statistician, he found four significant responses in the post-questionnaire that were dependent on the instructional groups (in person vs. online). They are summarized below and include the p value (confidence level).

1. Those students who identified themselves as receiving in-person library instruction used Academic Search Complete (EBSCO) significantly more for research purposes to complete their final Writing 10 paper than those who identified themselves as receiving online library instruction. (p=.012) q46
2. Approximately half of the students who identified themselves as receiving in-person instruction had taken the iPod Touch Library Tour while those students who identified themselves as receiving online tutorial instruction were less likely to have taken the iPod Touch Library Tour. (p=.017) q62
3. Those students who identified themselves as receiving library instruction via online tutorials were more likely to have received library instruction in a class that was *not a Writing class* than those students who had identified themselves as receiving online tutorial instruction. However, in both groups (those identifying themselves as receiving in-person library instruction or receiving online tutorial instruction) the majority had not received library instruction in other classes. (p=.045) q67
4. Participants who identified themselves as receiving in-person library instruction reported higher rates of satisfaction than those who identified themselves as receiving online tutorial instruction. (p=.04) q70/q71

### Additional Observations: Post-Questionnaire

The following information is derived from the post-questionnaire, questions 41 – 77. Most of these, not including the four items listed above\*\*\*, do not meet significant association criteria. Sometimes the differences between the groups, expressed in percentages, for each question are very small while others are much larger. See graphs for additional details and to note differences.

#### Respondents who Received *In-Person* Library Instruction

In order to complete a Writing 10 paper, students who received in-person library instruction were more likely than their peers who received online library instruction to ...

- have received prior library instruction in high school (q60), through the iPod Touch Library Tour (q62)\*\*\*, or in Writing 1 from Library staff (q61)
- be in Writing 10 for the first time (q68)
- search in library databases or catalogs (q49) including Academic Search Complete (EBSCO) (q46)\*\*\* and Google Scholar (q47).
- find full-text articles through UC Merced Library online databases (q41)
- order resources through Interlibrary loan including articles (q42) and books (q43)
- view an online book (q44) or check out a print book (q45)
- visit a library for research assistance (q57), contact library staff (e.g. through email, chat) (q59), and ask roving reference student assistants for help (q58)
- determine if an article was scholarly or popular (q51), use Ulrich's to determine if an article was scholarly or popular (q52)
- be very satisfied or satisfied with the library instruction they received (q71)\*\*\*

- email themselves references from catalogs or databases in the citation style they needed (q65)
- attend a RefWorks workshop (q64), use RefWorks to create a bibliography for their Writing 10 paper (q63), use a tool other than RefWorks to create a bibliography (q66)
- examine bibliographies and footnotes to find other references of use (q56)
- learn and use search strategies (q72)
- report greater gains in their comfort level in using library resources post library instruction (q74)

#### Respondents who Received *Online* Library Instruction

In order to complete a Writing 10 paper, students who received online library instruction were more likely than their peers who received in-person library instruction to ...

- have received library instruction in at least one other class at UC Merced which was **not** a Writing class (q67)\*\*\*
- search the Next General Melvyl pilot catalog (q48), or web search engines such as Google or Yahoo (q50)
- not search any library databases or catalogs (q49)
- view the library's handout (q53) or refer to the library's online tutorials (q54) to distinguish between popular and scholarly articles
- report feeling very comfortable/comfortable with using library resources *before* receiving library instruction in Writing 10 (q73)
- report a higher level of confidence in their research skills *before* receiving library instruction (q75)
- express higher levels of dissatisfaction with the *amount* of library instruction in Writing 10 (q77)

--issued Feb. 2011--

Report: Sara Davidson, UC Merced Library  
 Statistics: Chris Cate (UCSB Social Science Survey Center)  
 Graphs: David Mancini, UC Merced Library

# ***Writing 10***

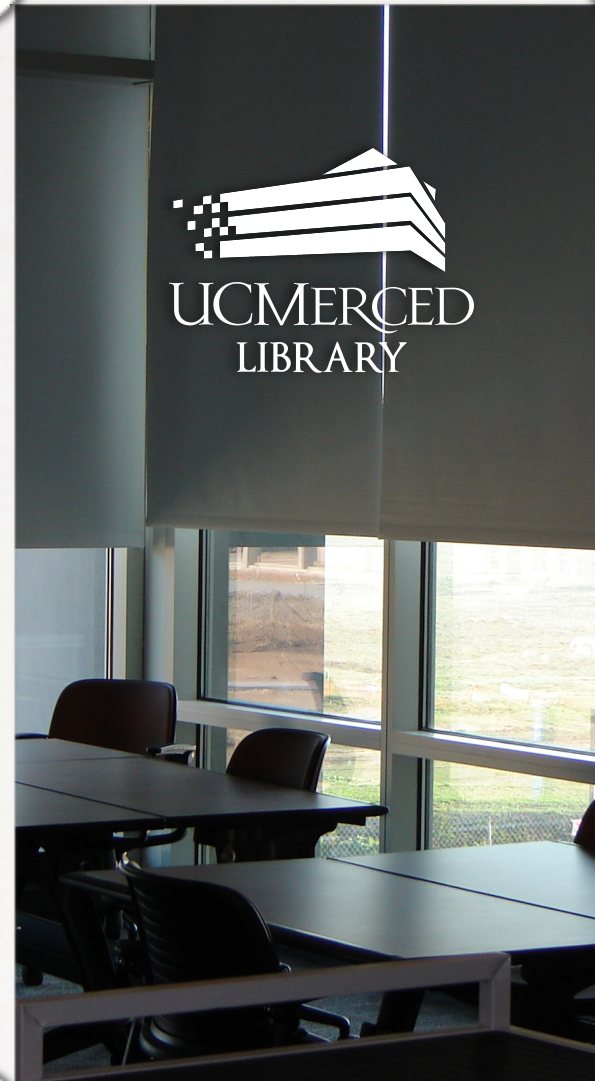
***College Writing and Composition  
Spring 2010***

## ***Library Training Questionnaire***

***Part I :***

***Questions 1 - 33***

***Comparing Pre & Post-Questionnaire  
Responses***



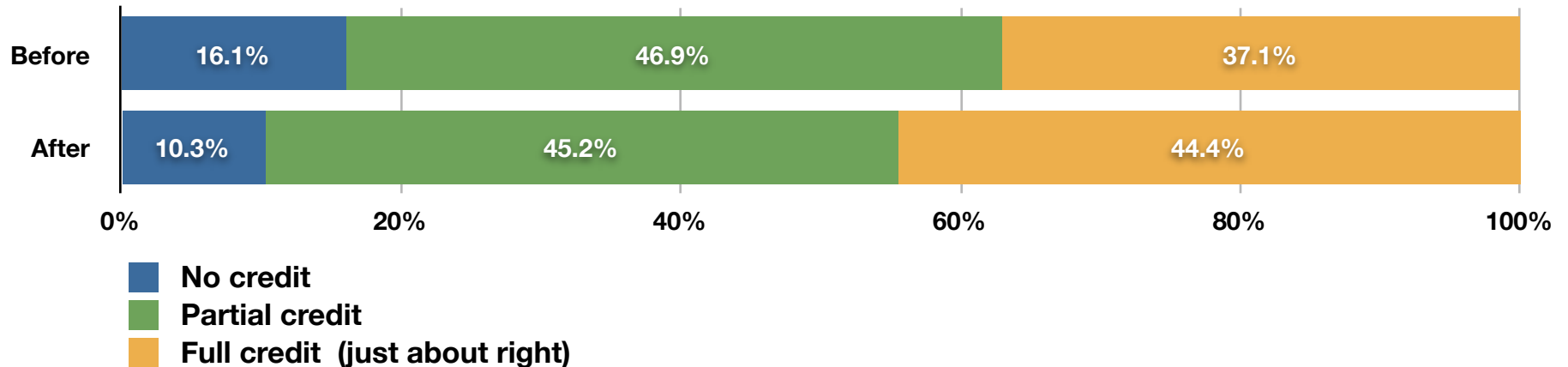


+

# Question 1 A

You need to write an 8-10 page paper on a topic. For each topic, rate it on a scale of 1 - 5.  
1- too broad / 2 –somewhat broad / 3 – just about right / 4 – somewhat narrow / 5 – too narrow:

How is Honda responding to demands for fuel efficient cars?



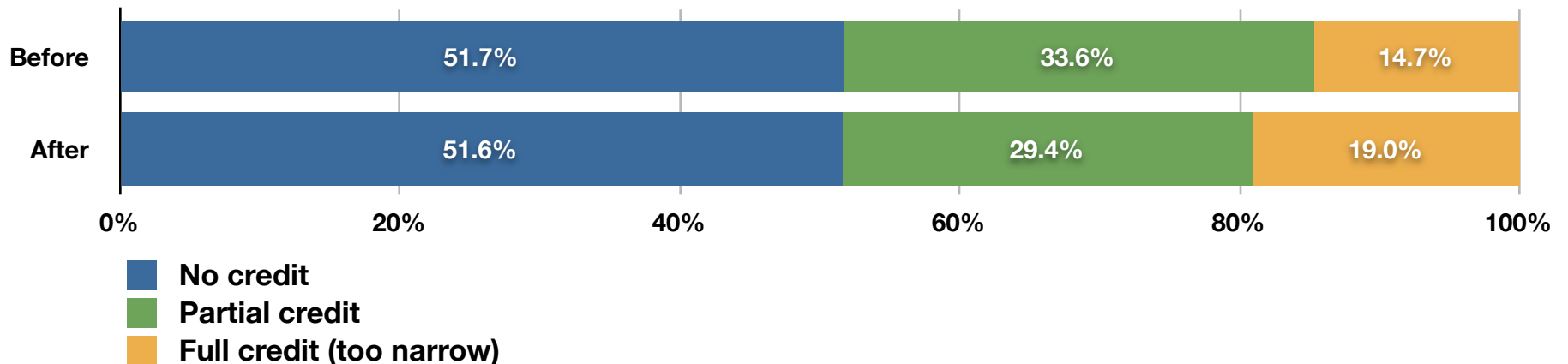
+ Students were slightly more successful with this question in the post-questionnaire (44.4%) than in the pre-questionnaire (37.1%). However in some of the following prompts, students were actually less successful when they had the same question in the post-questionnaire. This may also point to the overall difficulty of determining manageable topics.

Students will be able to identify manageable research topics. (1.1.d)

# Question 1 B

You need to write an 8-10 page paper on a topic. For each topic, rate it on a scale of 1 - 5.  
1- too broad / 2 –somewhat broad / 3 – just about right / 4 – somewhat narrow / 5 – too narrow:

Examine how Earthbound Farms produces its organic dried fruit snacks.



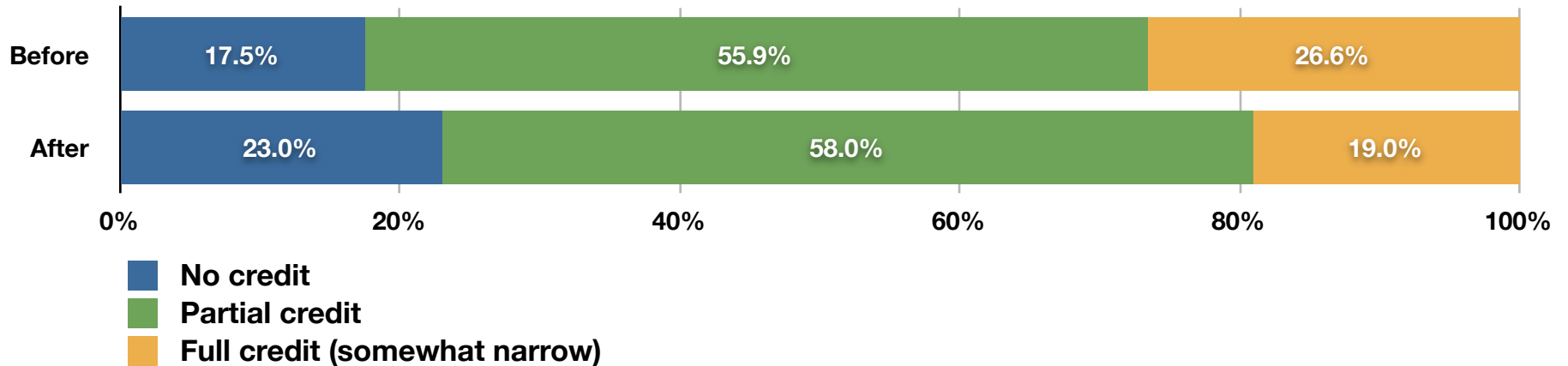
+ More students received full credit for this answer in the post-questionnaire (19.0%) than in the pre-questionnaire (14.7%), but the percentage of students who received no credit in either questionnaire is almost unchanged.

Students will be able to identify manageable research topics. (1.1.d)

# Question 1 C

You need to write an 8-10 page paper on a topic. For each topic, rate it on a scale of 1 - 5.  
1- too broad / 2 –somewhat broad / 3 – just about right / 4 – somewhat narrow / 5 – too narrow:

To what extent did Napoleon Boneparte's mother influence his political ambitions?



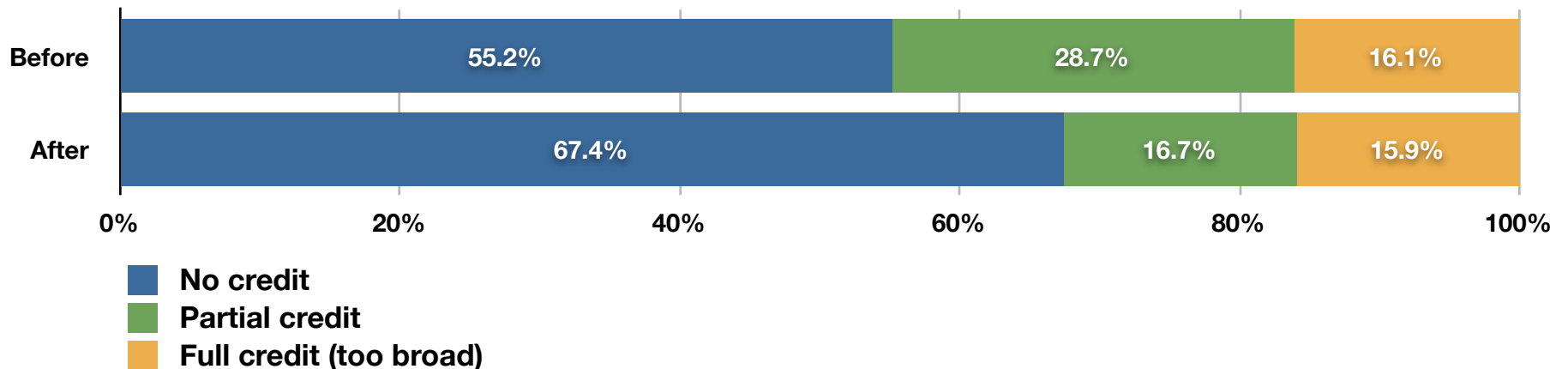
- Fewer students received full credit for this answer in the post-questionnaire (19.0%) than in the pre-questionnaire (26.6%).

Students will be able to identify manageable research topics. (1.1.d)

# Question 1 D

You need to write an 8-10 page paper on a topic. For each topic, rate it on a scale of 1 - 5.  
1- too broad / 2 –somewhat broad / 3 – just about right / 4 – somewhat narrow / 5 – too narrow:

How have the Napoleonic Wars shaped the course of modern history in Europe?



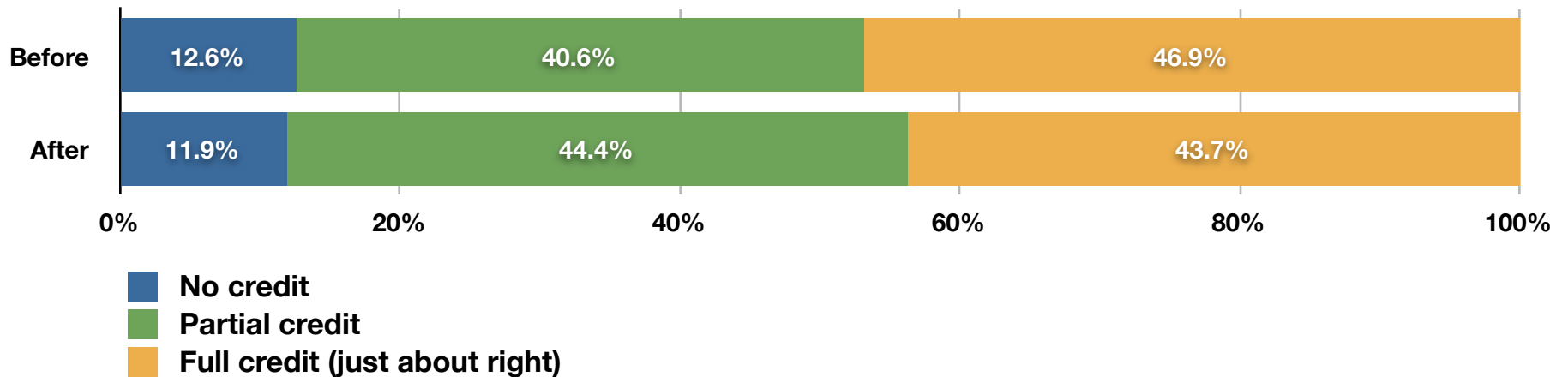
- Fewer students received full credit for this answer in the post-questionnaire (15.9%) than in the pre-questionnaire (16.1%) by a slight margin and even more students received no credit in the post-questionnaire than in the pre-questionnaire.

Students will be able to identify manageable research topics. (1.1.d)

# Question 1 E

You need to write an 8-10 page paper on a topic. For each topic, rate it on a scale of 1 - 5.  
1- too broad / 2 –somewhat broad / 3 – just about right / 4 – somewhat narrow / 5 – too narrow:

**What marketing techniques have contributed to a thriving bottled water industry?**



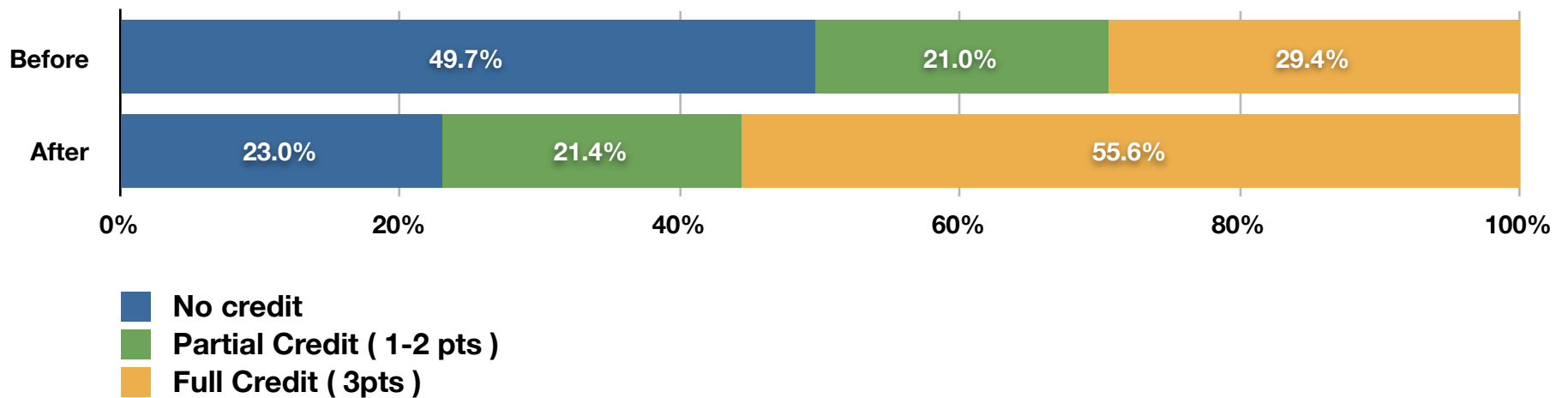
- Fewer students received full credit for this answer in the post-questionnaire (43.7%) than in the pre-questionnaire (46.9%).

Students will be able to identify manageable research topics. (1.1.d)

# Question 2

Identify the three key concepts or terms for the following topic:

To what extent are banks offering credit to college students?



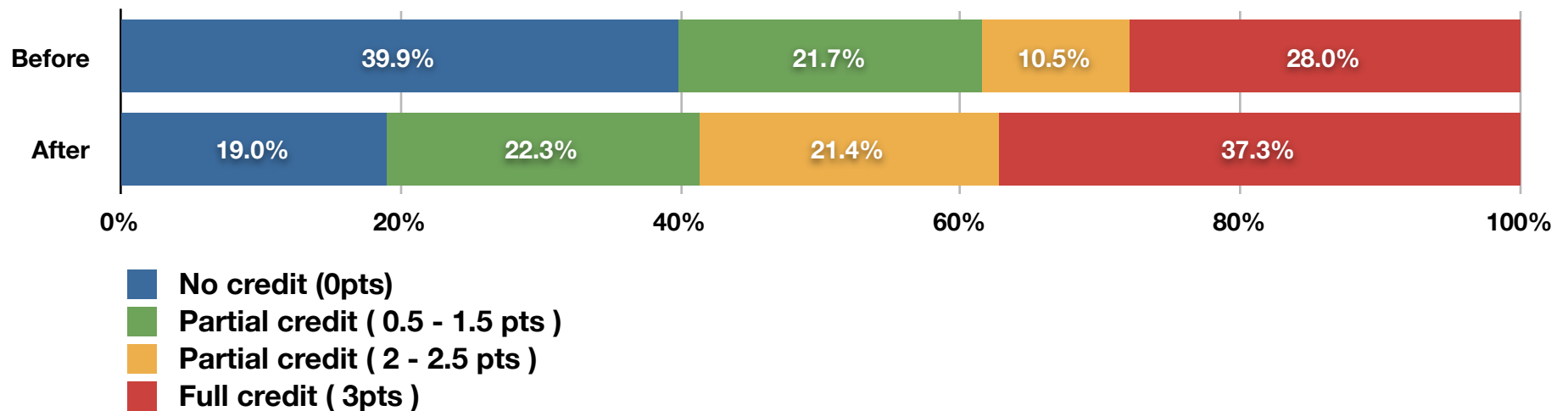
+ Many more students were able to correctly identify the key concepts in this question in this post-questionnaire (55.6%) than they had in the pre-questionnaire (29.4%).

Students will be able to identify key concepts and terms to describe an information need. 1.1.e

# Question 3

Identify the three key concepts or terms for the following topic:

Should public employees have the right to strike?

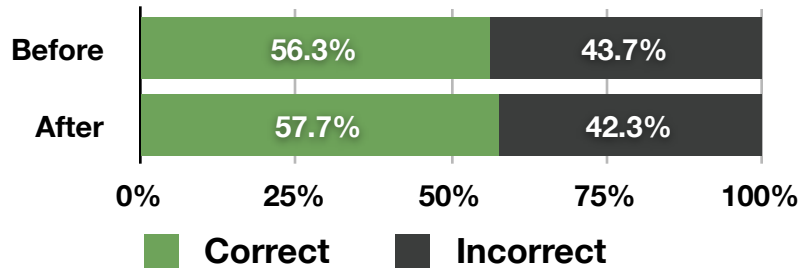


This question is similar to #2. Students were more successful identifying all the key terms in the post-questionnaire (37.3%) than they had been in the pre-questionnaire (28.0%).

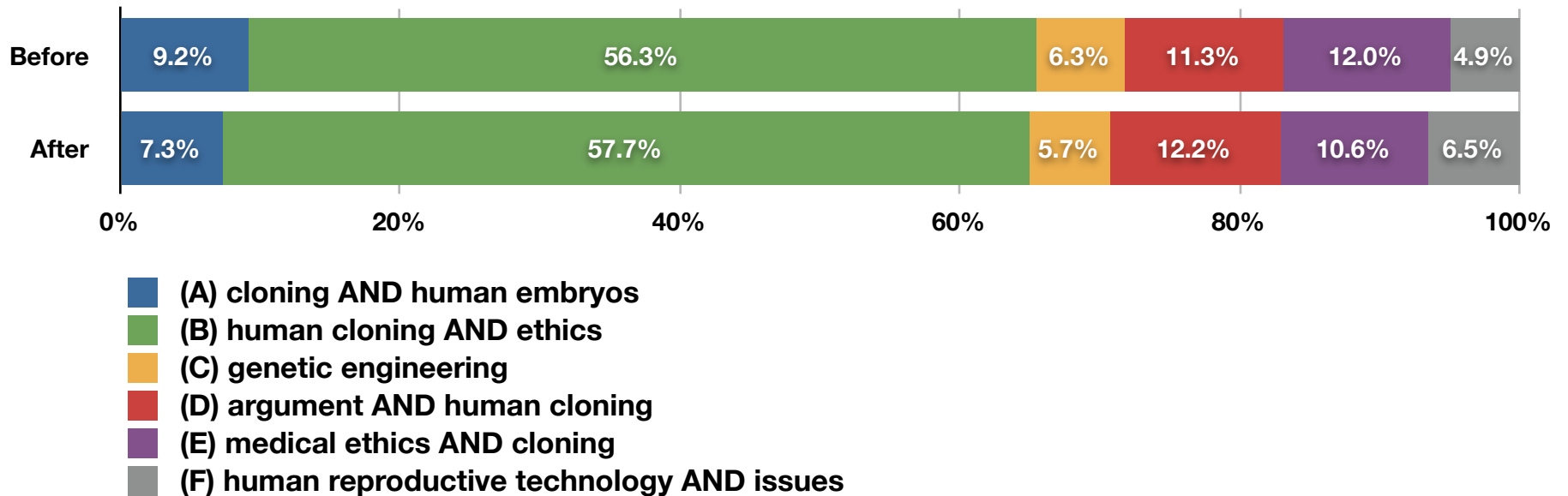
Students will be able to identify key concepts and terms to describe an information need. 1.1.e

# Question 4

You have just been assigned the following research topic: "Address the ethical arguments for and against human cloning research". Identify the best search strategy for your first search.



The results in the pre and post-questionnaire were very similar for this question. There was little improvement in identifying the optimal answer though over 57% of respondents selected the correct answer.

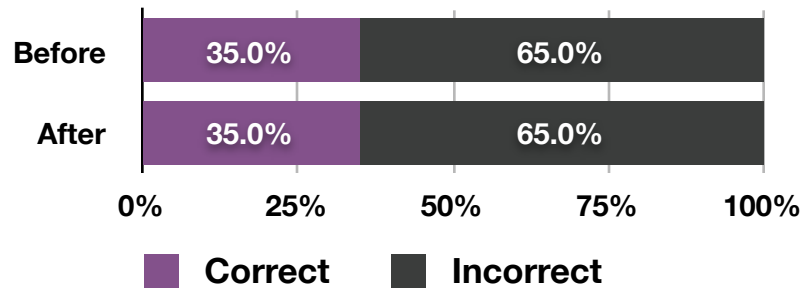


Students will be able to identify key concepts and terms to describe an information need. 1.1.e

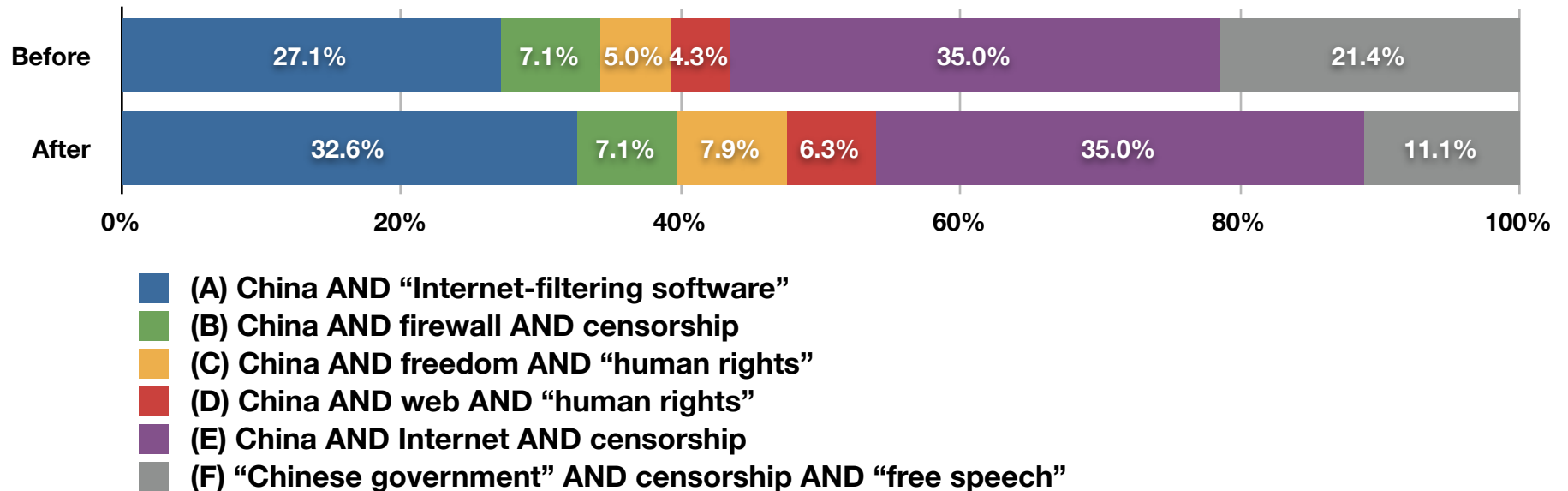


# Question 5

You have just been assigned the following research topic: "Analyze China's current position on its use of Internet-filtering software to censor information." Identify the best search strategy for your first search.



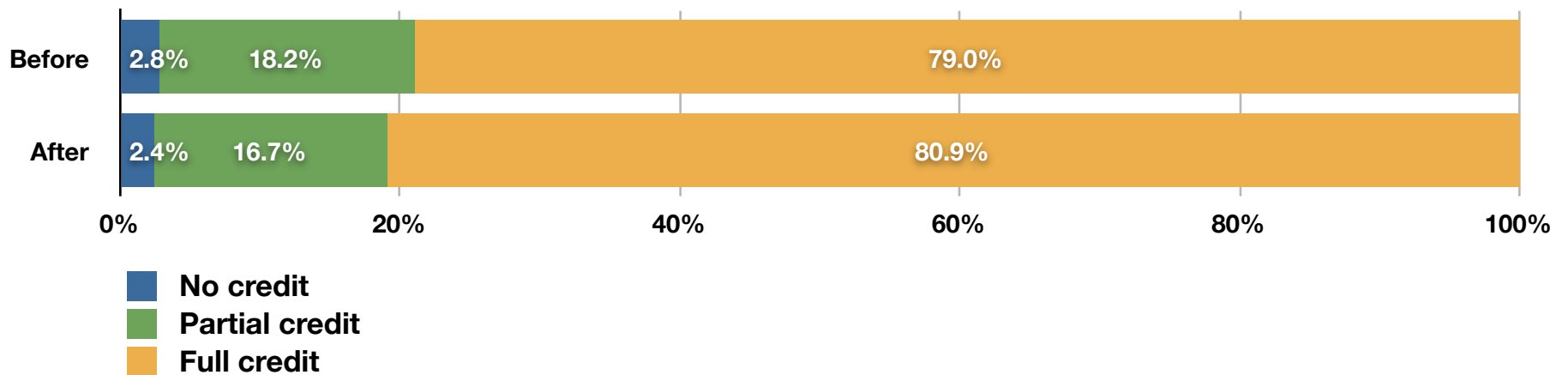
The results in the pre and post-questionnaire were very similar for this question. There was no improvement in identifying the optimal answer. However, the second most popular answer was a reasonable selection.



Students will be able to identify key concepts and terms to describe an information need. 1.1.e

# Question 6

Identify two synonyms or closely related terms for the following word: Vehicle

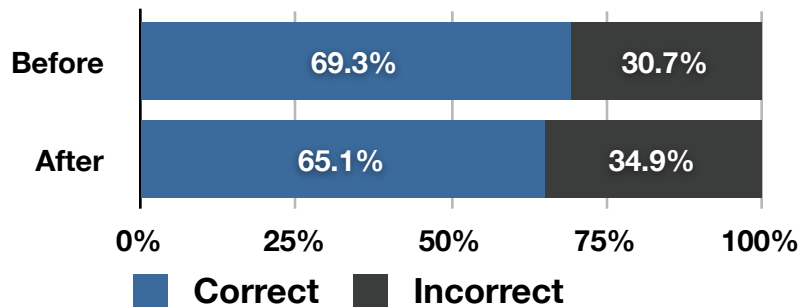


Though the majority of students received full credit for this question, there was little change between pre and post-questionnaire results. The majority of respondents answered this question correctly. This question was fill in the blank.

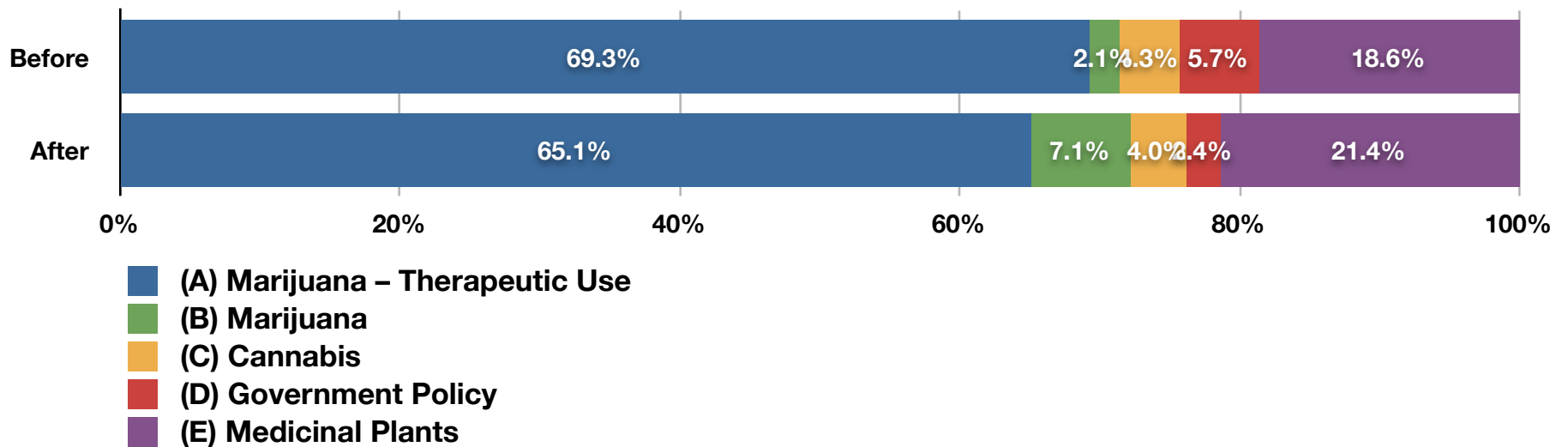
Students will be able to identify terminology including synonyms to describe key concepts and terms 2.2.b

# Question 7

You have just completed a search for “medicinal marijuana”. You want to expand your search by using other relevant terms. What other subject term is most closely related to your original search?



- Students performed better on this question in the pre questionnaire than in the post-questionnaire. While A was the preferred answer, E would make sense as the next best option.

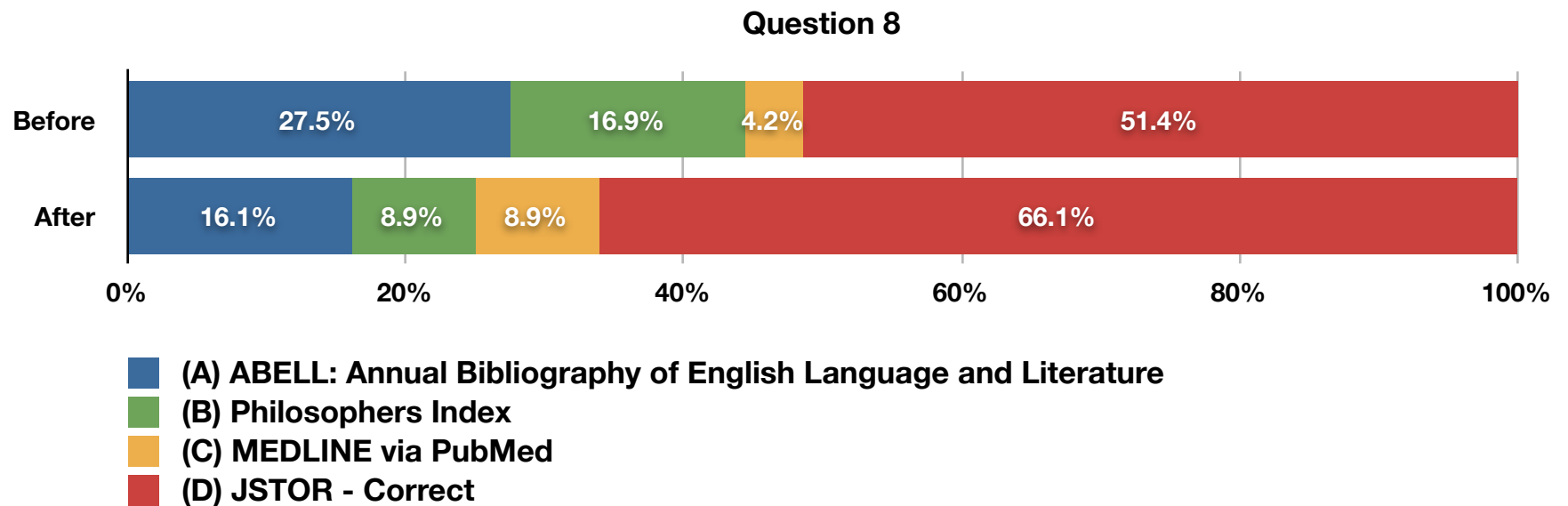


Note: Possible answers are based on subject terms visible on a screenshots from the database Academic Search Complete.

Students will be able to identify controlled vocabulary to revise or improve a search (2.2.c)

# Question 8

If you had to write a paper examining how the television has changed presidential candidate campaigns, what resource from the library's database listing would be most appropriate to search?

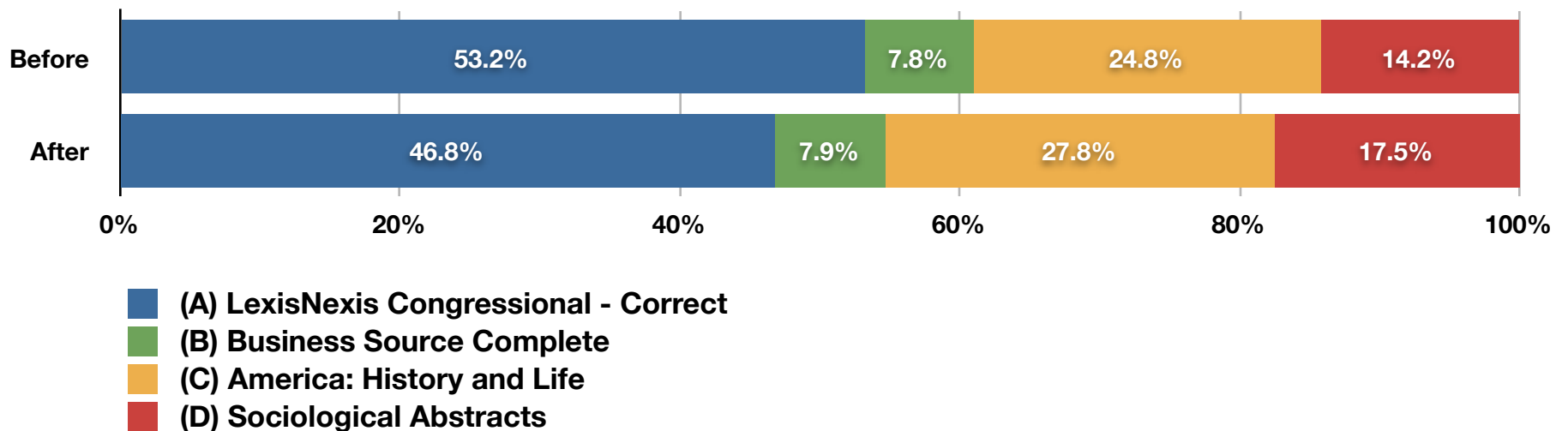


+ More students correctly identified the correct response in the post-questionnaire (66.1%) than they had in the pre-questionnaire (51.4%). [Note: In the questionnaires, each database name was followed with a content description.]

Students will be able to select appropriate search tools for a particular topic 2.1.c. / 2.3.a

# Question 9

If you had to write a paper examining recent policy decisions in the United States regarding climate changes, what resource from the library's database listing would be most appropriate to search?

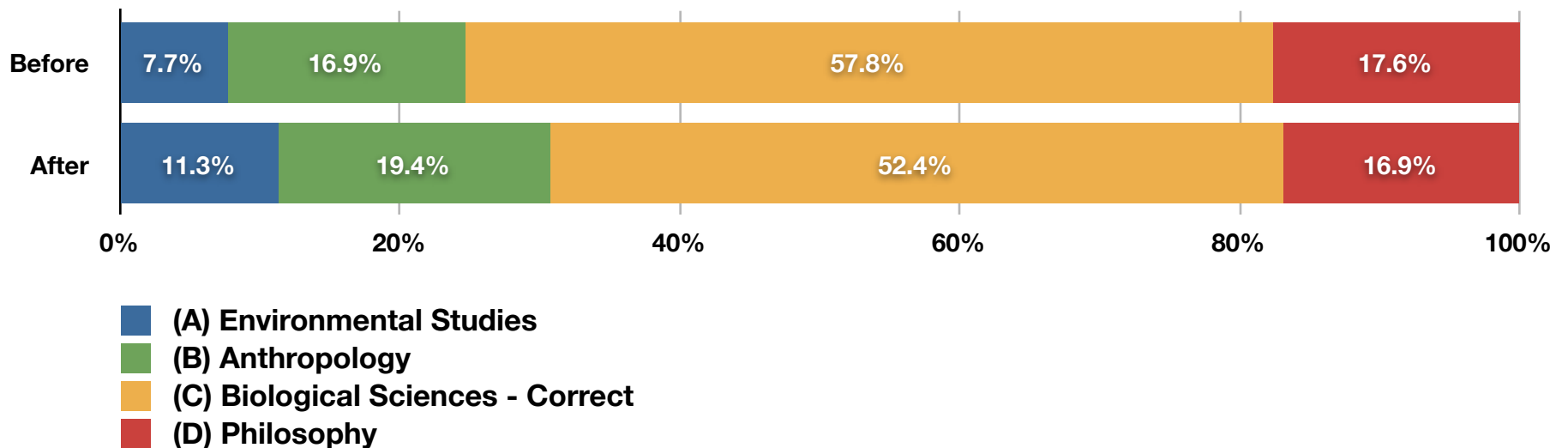


- Fewer students correctly identified the correct response in the post-questionnaire (46.8%) than they had in the pre-questionnaire (53.2%). [Note: In the questionnaires, each database name was followed with a content description.]

Students will be able to select appropriate search tools for a particular topic 2.1.c. / 2.3.a

# Question 10

If you had to write a paper discussing how depression is treated, which database subject area would you select?

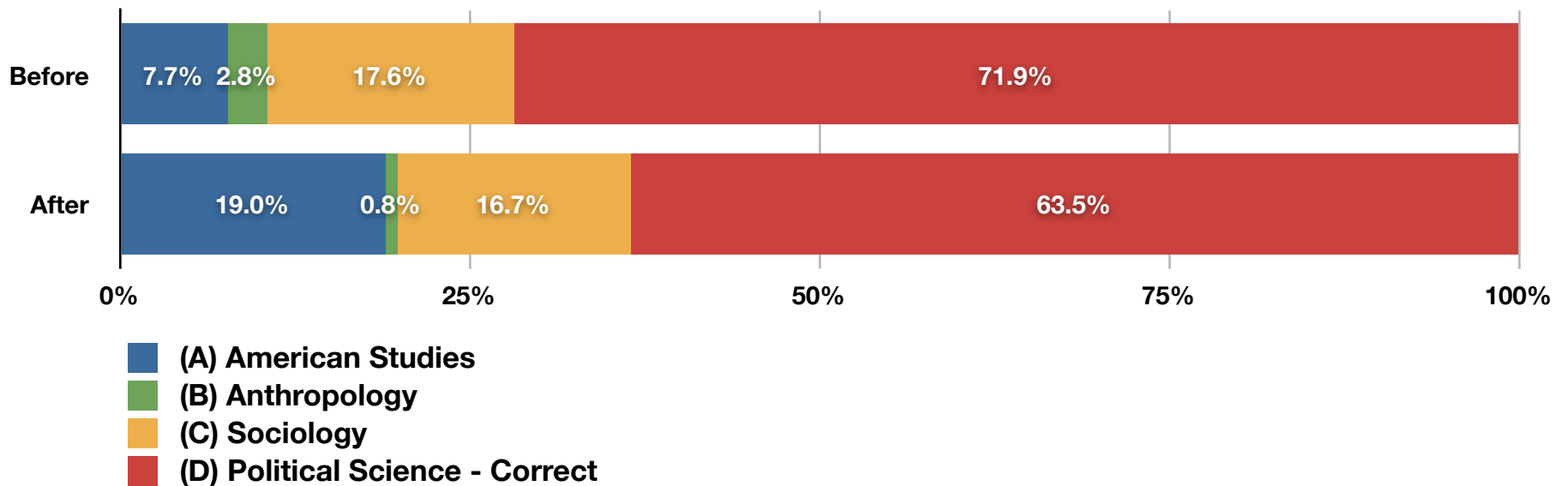


- Fewer students correctly identified the correct response in the post-questionnaire (52.4%) than they had in the pre-questionnaire (57.8%). [Note: In the questionnaires, each database name was followed with a content description.]

Students will be able to select appropriate search tools for a particular topic 2.1.c. / 2.3.a

# Question 11

If you had to write a paper discussing the topic of the legality of capital punishment in the United States, which database subject area would you select?

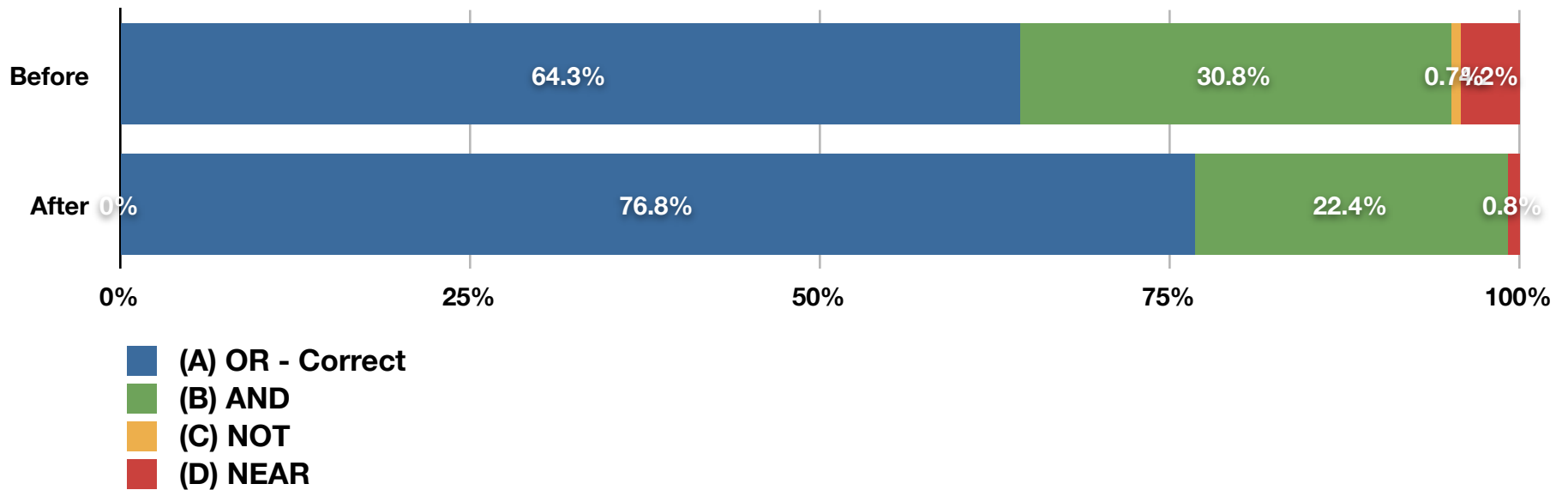


- Fewer students selected the correct answer in the post-questionnaire (63.5%) than they had in the pre-questionnaire (71.9%). Though American Studies and Sociology may include some information on this topic, the use of the word “legality” suggests that students should first look at the subject area of Political Science. [Note: In the questionnaires, each database name was followed with a content description.]

Students will be able to select appropriate search tools for a particular topic 2.1.c. / 2.3.a

# Question 12

If you wanted to search for a topic with several synonyms (e.g. phone, cell phone, telephone, flip phone), what word would you use to join the terms or phrases together?

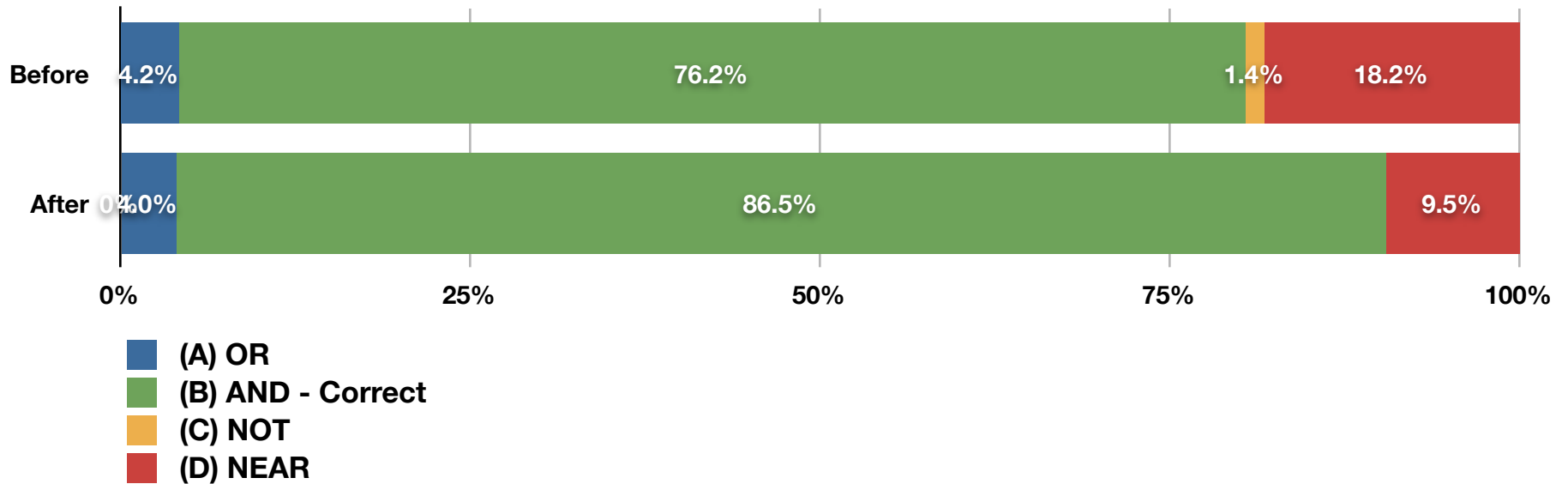


+ A greater number of students selected the correct answer in the post-questionnaire (76.8%) than in the pre-questionnaire (64.3%).



# Question 13

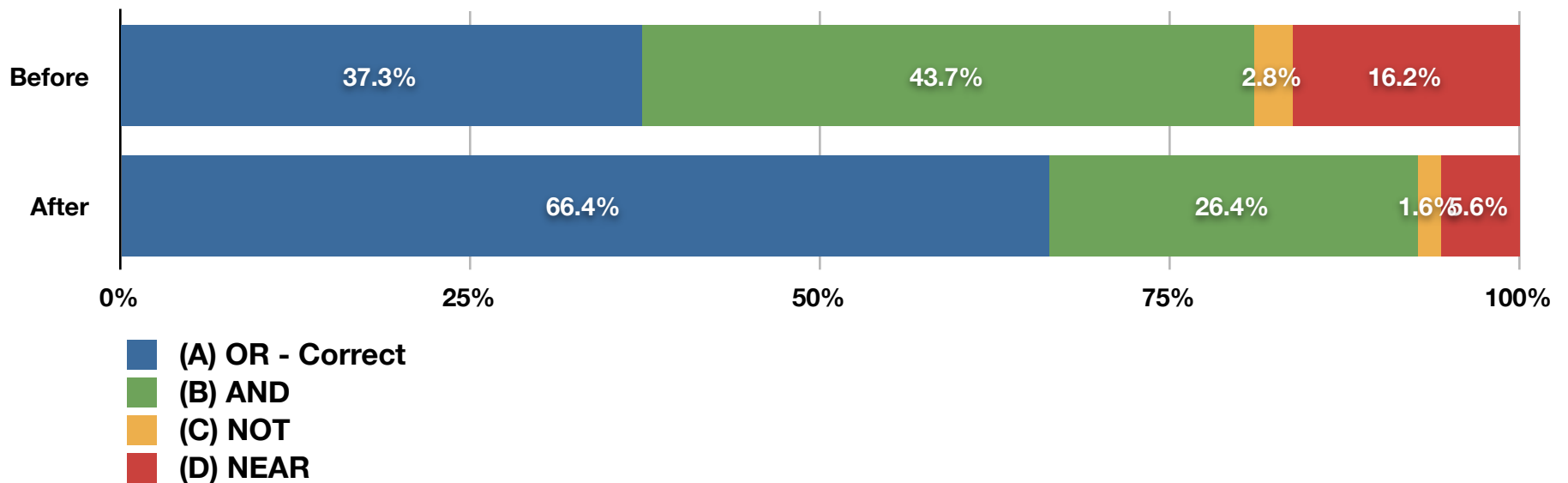
If you wanted to search for information on ecotourism in Brazil, what term would you use to join together these search terms: ecotourism; Brazil?



+ A greater number of students selected the correct answer in the post-questionnaire (86.5%) than in the pre-questionnaire (76.2%).

# Question 14

If you wanted to expand the number of search results,  
what Boolean operator would you use to join together search terms?

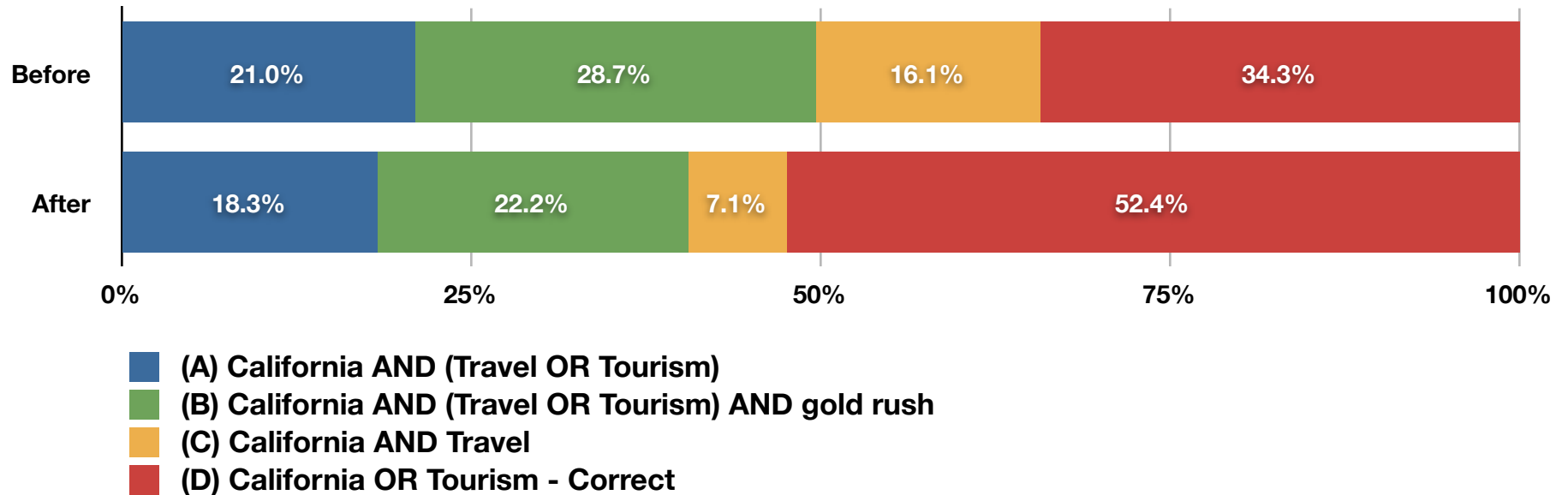


+ Many more students selected the correct answer in the post-questionnaire (66.4%) than in the pre-questionnaire (37.3%). Questions 12-16 may indicate that though students often know the concept of OR and AND in searching, they are not always successfully translating this into an actual search. Some of them may retain a surface understanding.

Students will be able to demonstrate an understanding of Boolean logic to retrieve appropriate resources 2.1.c & 2.2.d

# Question 15

Which search will yield the largest set of results?

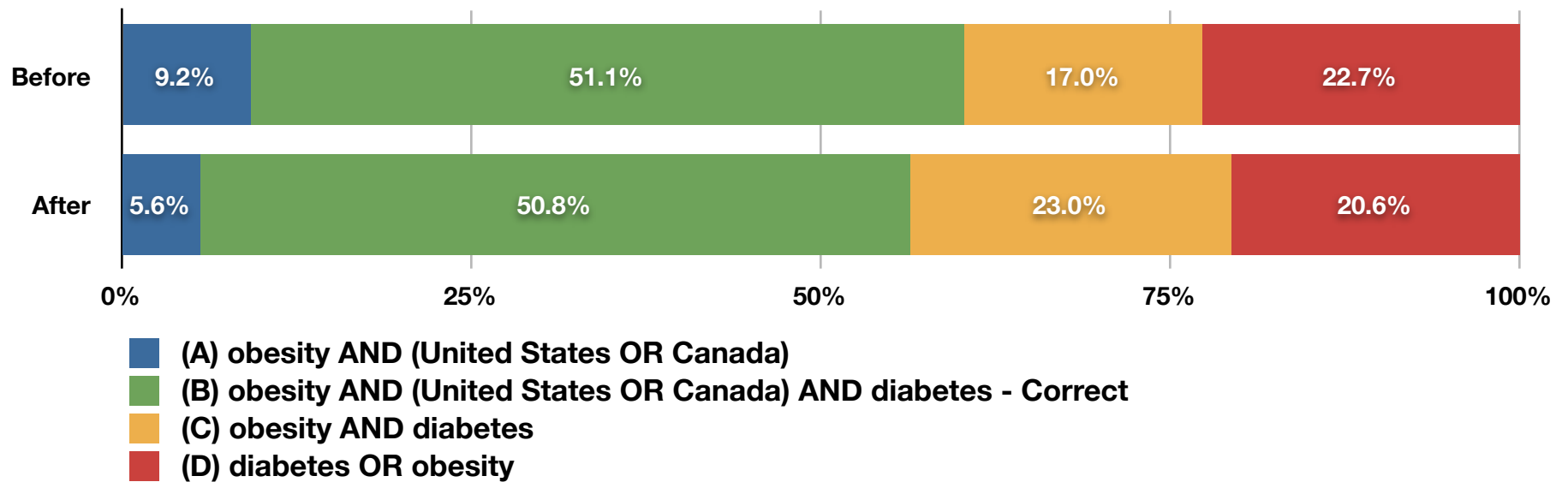


+ More students selected the correct answer in the post-questionnaire (52.4%) than in the pre-questionnaire (34.3%).

Students will be able to demonstrate an understanding of Boolean logic to retrieve appropriate resources 2.1.c & 2.2.d

# Question 16

Which search will yield the smallest set of results?



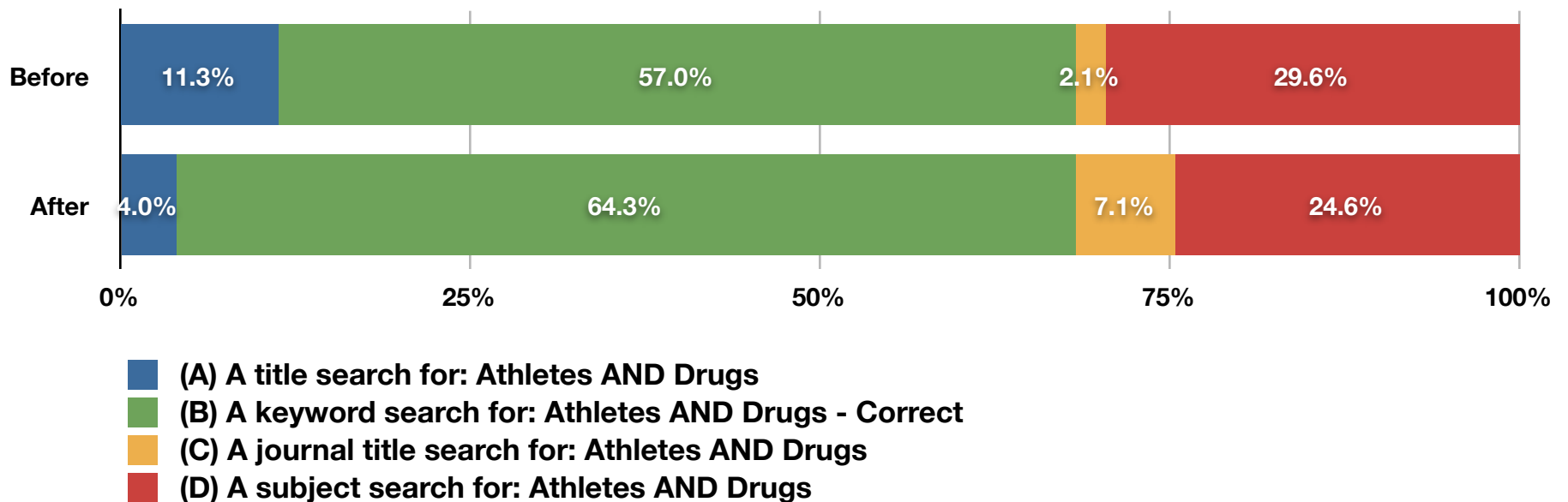
Student answers were very similar in pre and post-questionnaire for this question and over 50% answered it correctly. They did not improve in the post-questionnaire.

Students will be able to demonstrate an understanding of Boolean logic to retrieve appropriate resources 2.1.c & 2.2.d

# Question 17

You want to find information on the topic of athletics and drug use.

Which search is the best to start with?

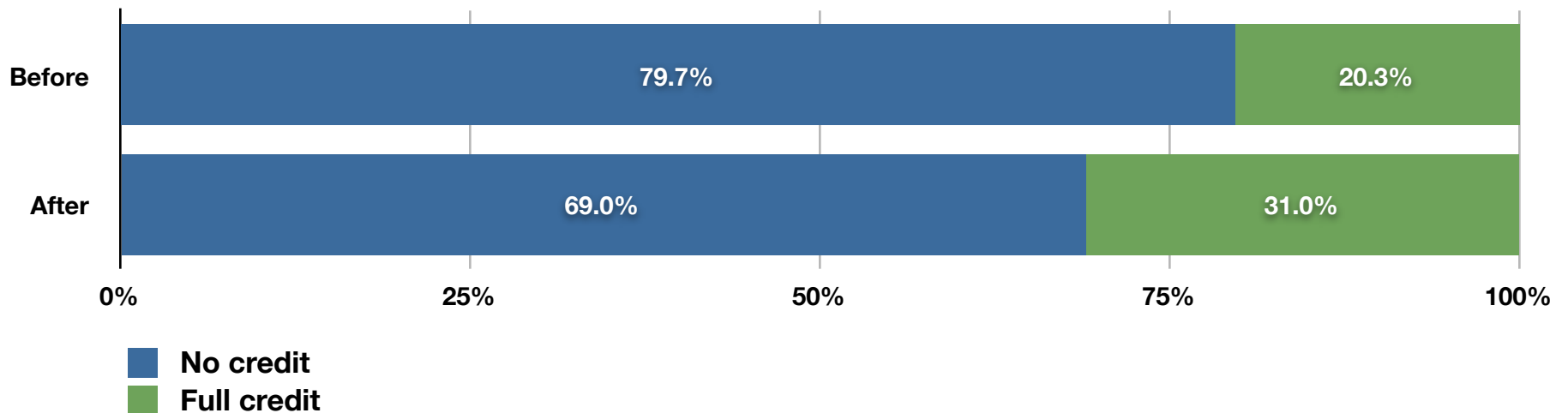


+ More students responded correctly to this question in the post-questionnaire (64.3%) than in the pre-questionnaire (57.0%). Though the subject search sounds good in theory, it is often not very successful as a first search.

Students will be able to understand the concept of keyword searching 2.2.d

# Question 18

If you use the truncation symbol at the end of economi \*, which term(s) will be included in your search:  
economy; economics; economical; macroeconomics?

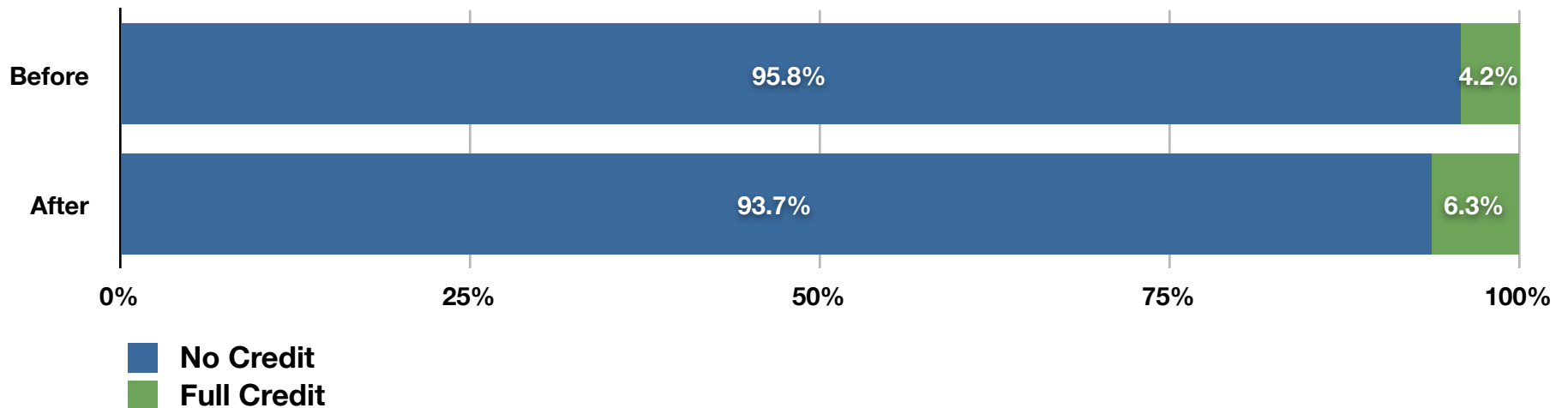


Only 31% of students selected ALL and ONLY the terms that are included in a search of economi\*. Unfortunately, this seems to be a low number of full credit responses for the post-questionnaire.

Students will be able to understand the concept of truncation 2.2.d

# Question 19

You have recently been assigned a research topic. You need to find information on how employees are coached in organizations. This is your original search [screen shot is provided in questionnaire] which give you over 1,500 results. How might you change your search, by selecting different field in which to search, to obtain more relevant results? Select all search strategies that apply.



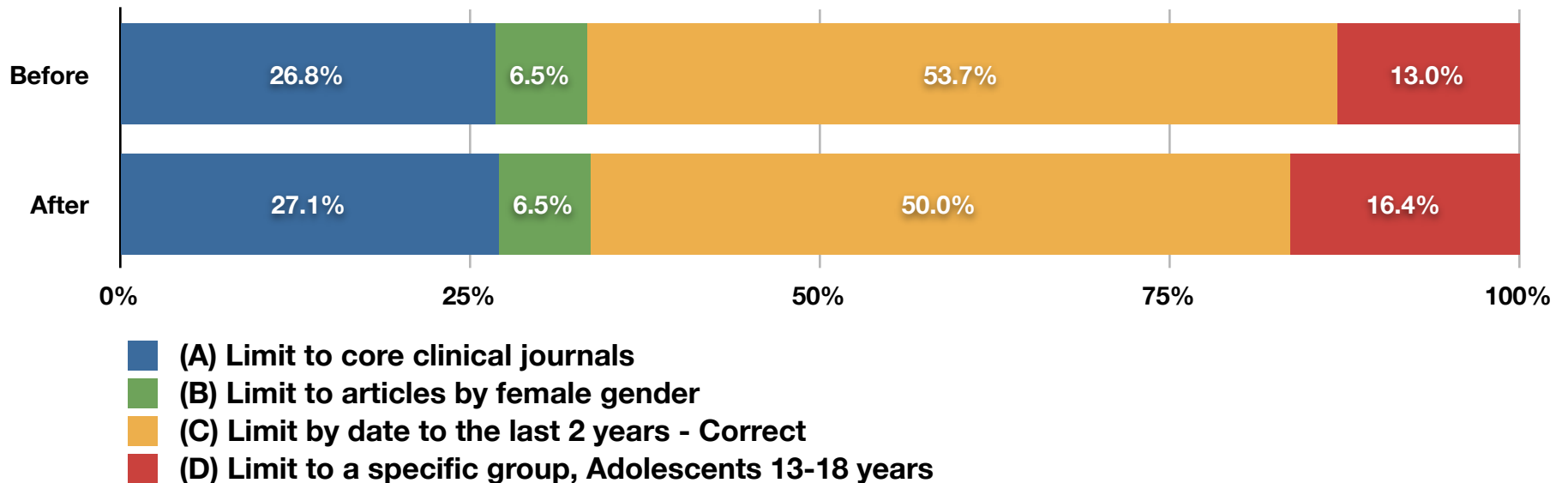
Only 6.3% of students selected ALL and ONLY the appropriate search strategies to narrow down to more relevant results. This is extremely low.

Students will be able to limit to specific search fields appropriately (2.2.e / 3.7.b)

# Question 20

You are researching the topic of recent treatments for cerebral malaria in Africa and have over 1000 results.

What would be an appropriate limiter to use?



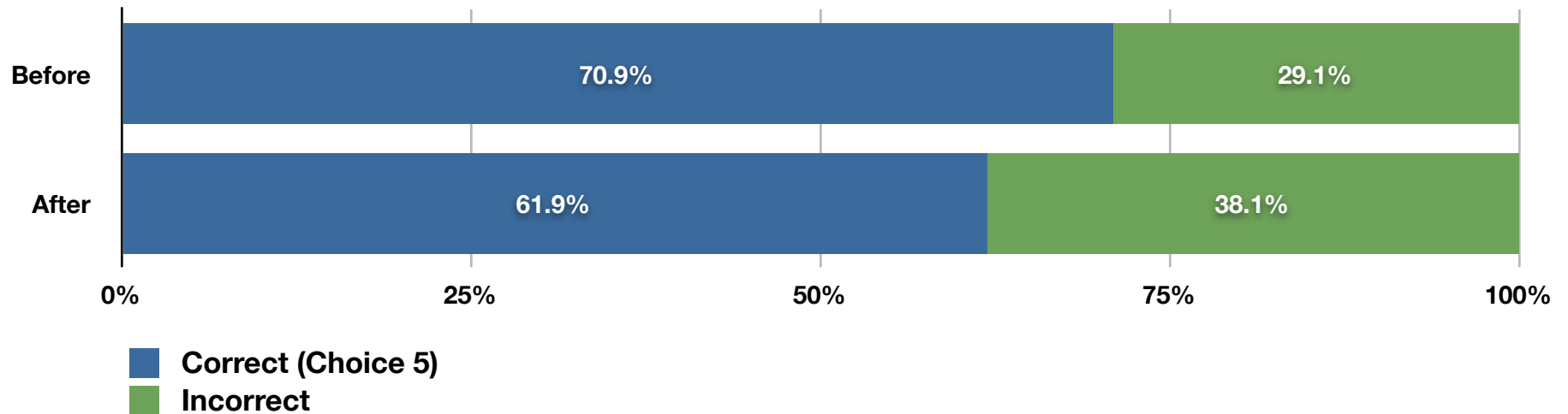
- Fewer students selected the correct answer in the post-questionnaire (50.0%) than in the pre-questionnaire (53.%).

Students will be able to utilize limiters as appropriate (2.2.3 / 3.7.b)



# Question 21

Which of the following citations looks like it would be most useful for your topic on how popular television programs can benefit society? Type the number of the citation.



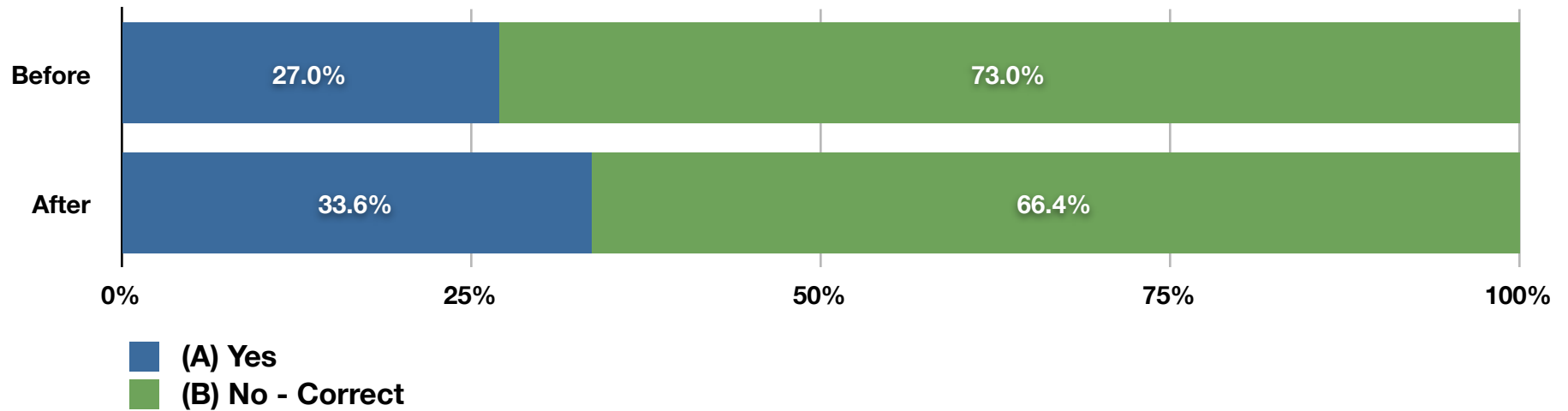
- Fewer students selected the correct answer in the post-questionnaire (61.9%) than in the pre-questionnaire (70.9%).

Students will be able to determine the relevance of an item by examining citation information 2.4.a

# Question 22

Examine this citation and summary.

Is this article highly relevant for your topic on electric cars?



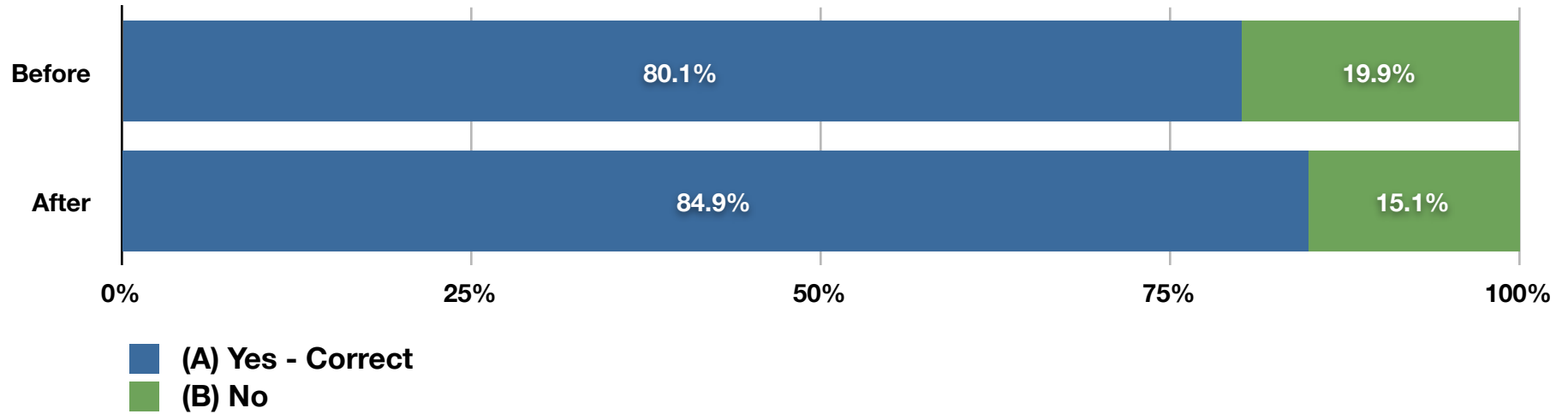
- Fewer students selected the correct answer in the post-questionnaire (66.4%) than in the pre-questionnaire (73.0%).

Students will be able to determine the relevance of an item by examining citation information 2.4.a

# Question 23

Examine this citation and summary.

Is this article highly relevant for your topic on using ocean tides to generate energy?

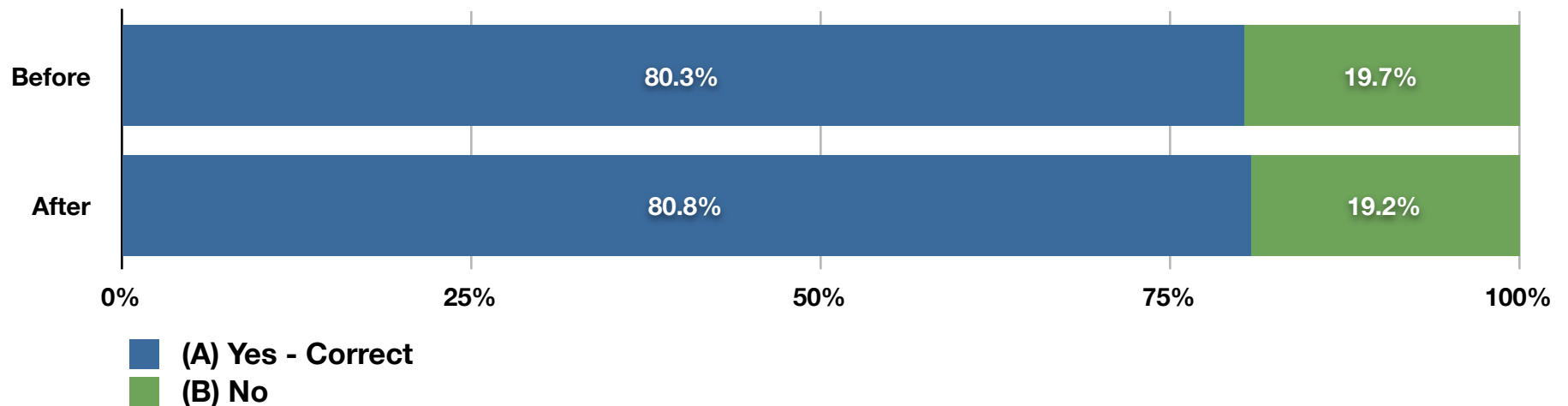


+ More students selected the correct answer in the post-questionnaire (84.9%) than in the pre-questionnaire (80.1%).

Students will be able to determine the relevance of an item by examining citation information 2.4.a

# Question 24

You are searching for information on the following topic: Investigate the current status of large wages for professional athletes. Do a minimum of four of these five articles look relevant for your topic?

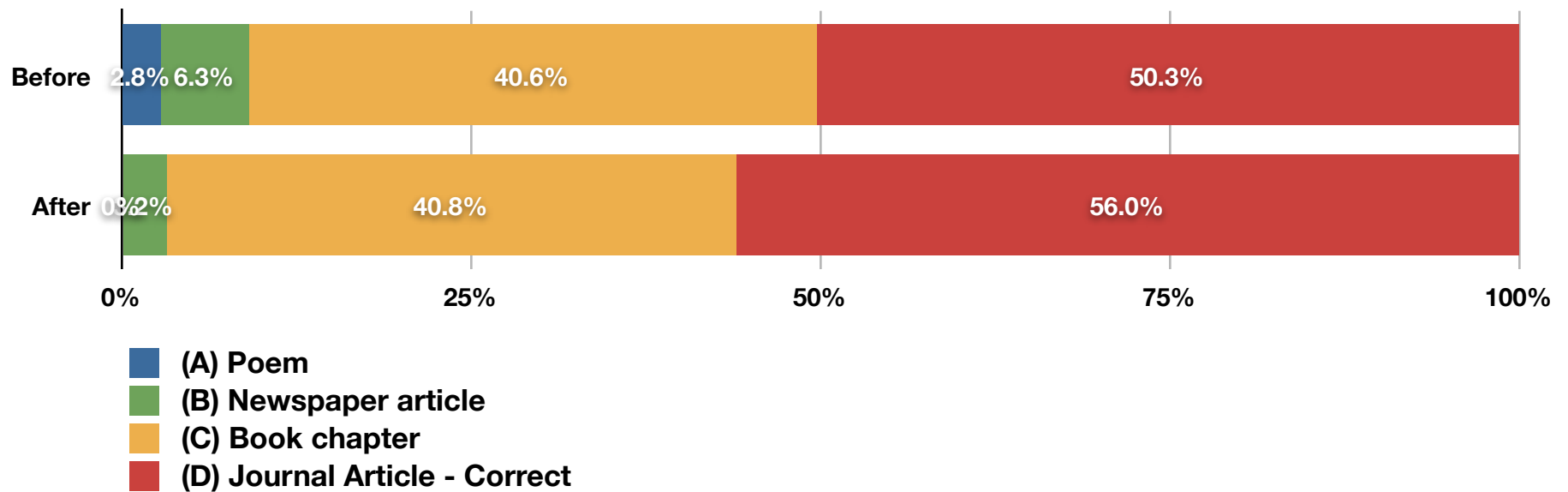


\* The percentage of correct and incorrect answers stayed almost the same from the pre to post-questionnaire. Over 80% of students answered this correctly.

# Question 25

Examine the citation below.

What type of information source is it?



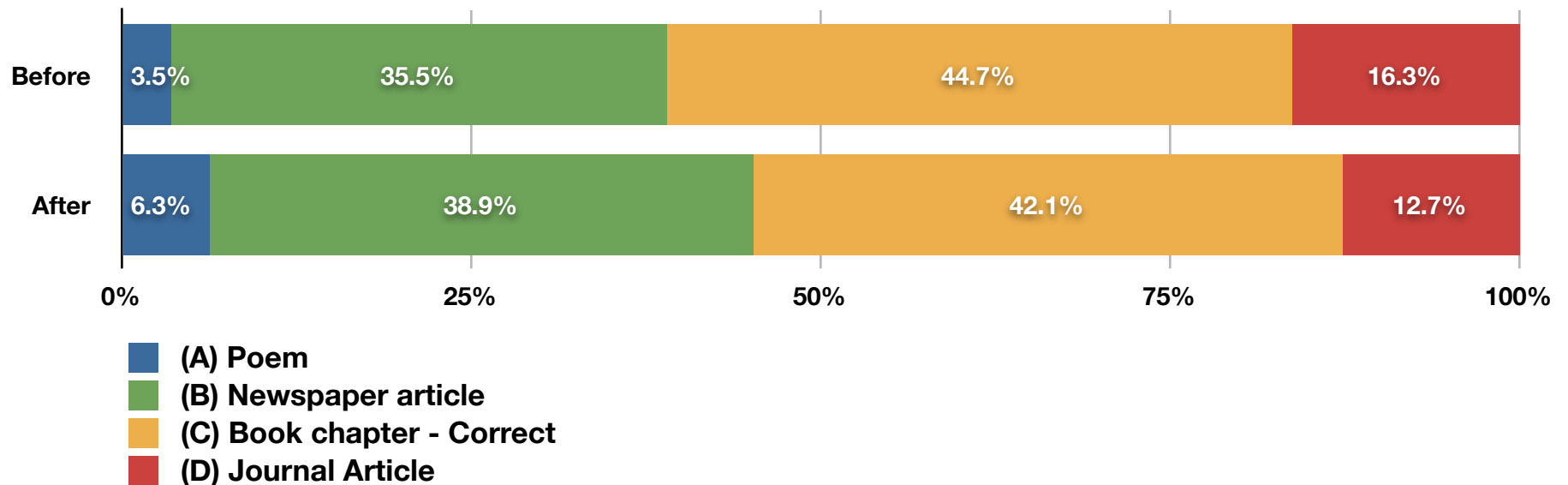
+ A few more students correctly identified the type of information sources in the post-questionnaire (56.0%) than they had in the pre-questionnaire (50.3%).

Students will be able to identify the types of information sources in a result set (list of citations) 2.5.c

# Question 26

Examine the citation below.

What type of information source is it?



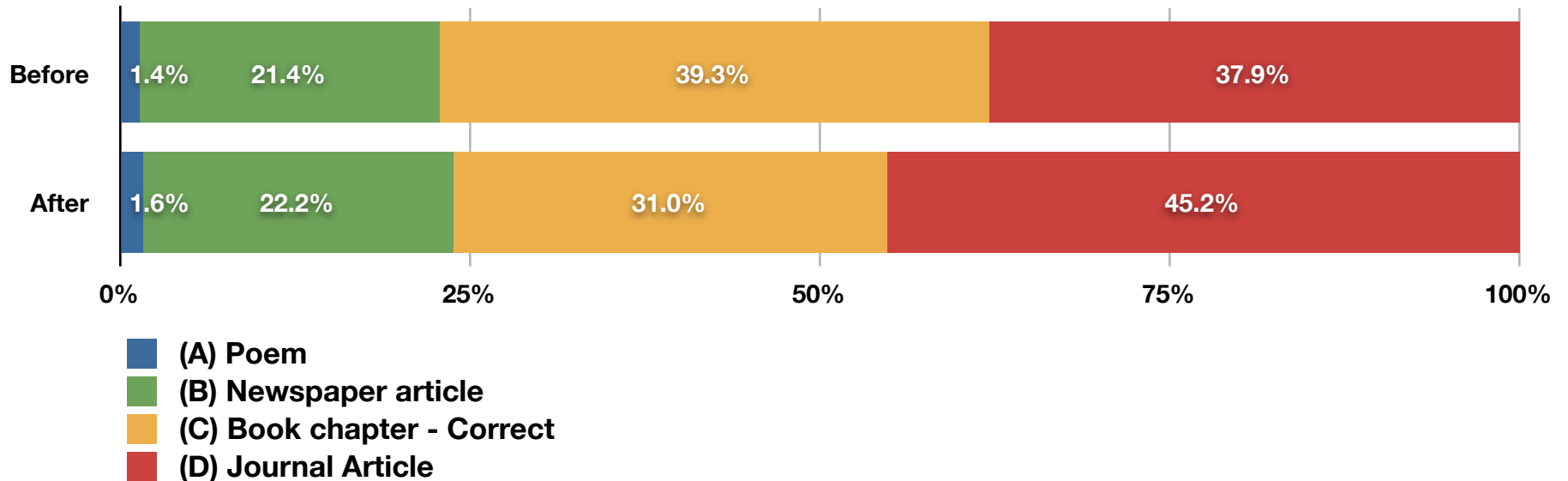
- Fewer students identified the correct answer in the post-questionnaire (42.1%) than they had in the pre-questionnaire (44.7%).

Students will be able to identify the types of information sources in a result set (list of citations) 2.5.c

# Question 27

Examine the citation below.

What type of information source is it?



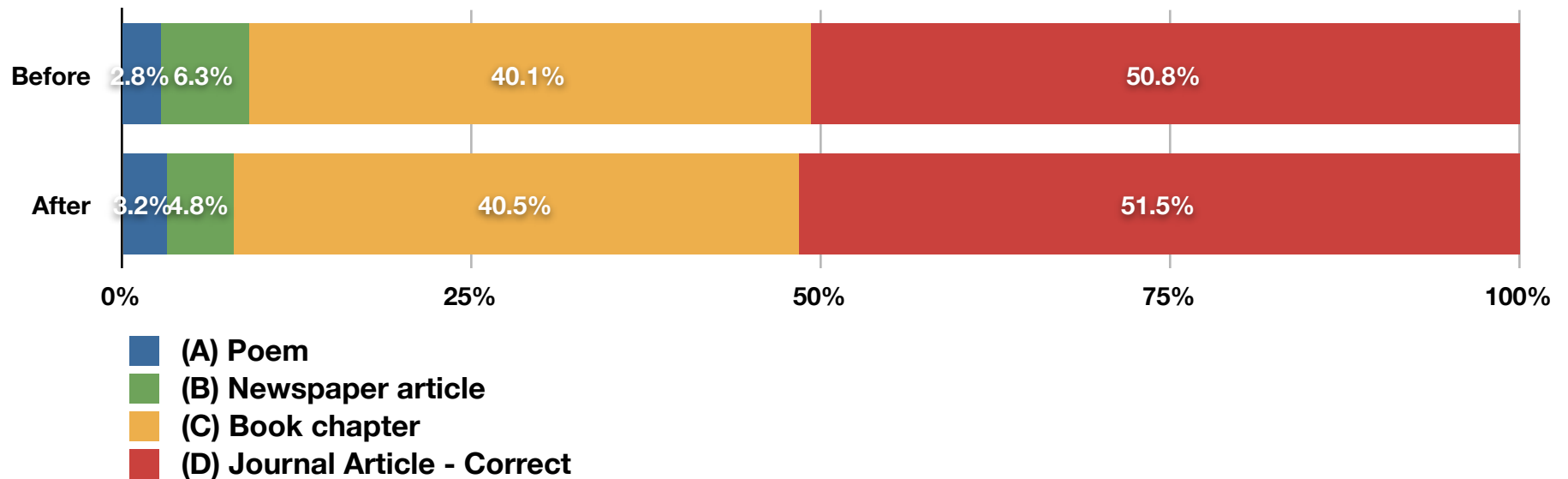
- Fewer students identified the correct answer in the post-questionnaire (31.0%) than they had in the pre-questionnaire (39.3%). Correctly identifying book chapters from a citation appears to be problematic.

Students will be able to identify information source types based on citation information 2.5.c

# Question 28

Examine the citation below.

What type of information source is it?



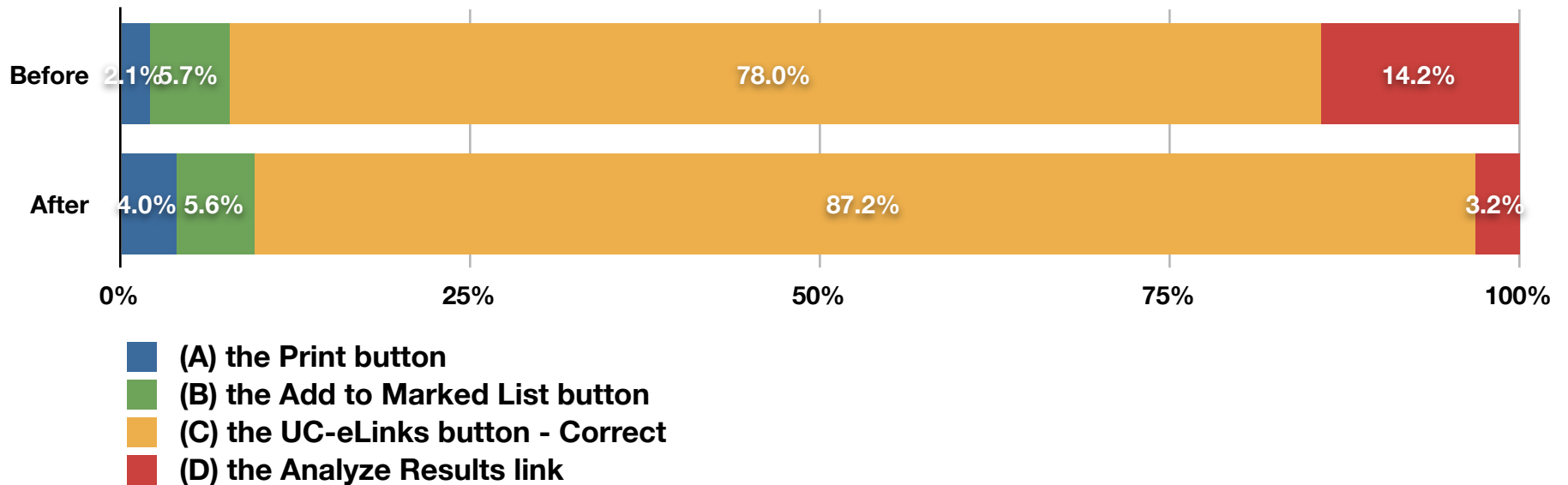
Results between the pre and post-questionnaire for this question are very similar. Over 50% of students answered correctly.

Students will be able to identify information source types based on citation information 2.5.c



# Question 29

Once you have found an article of interest in a database,  
what would you click to see if UC Merced has the article available in full-text?

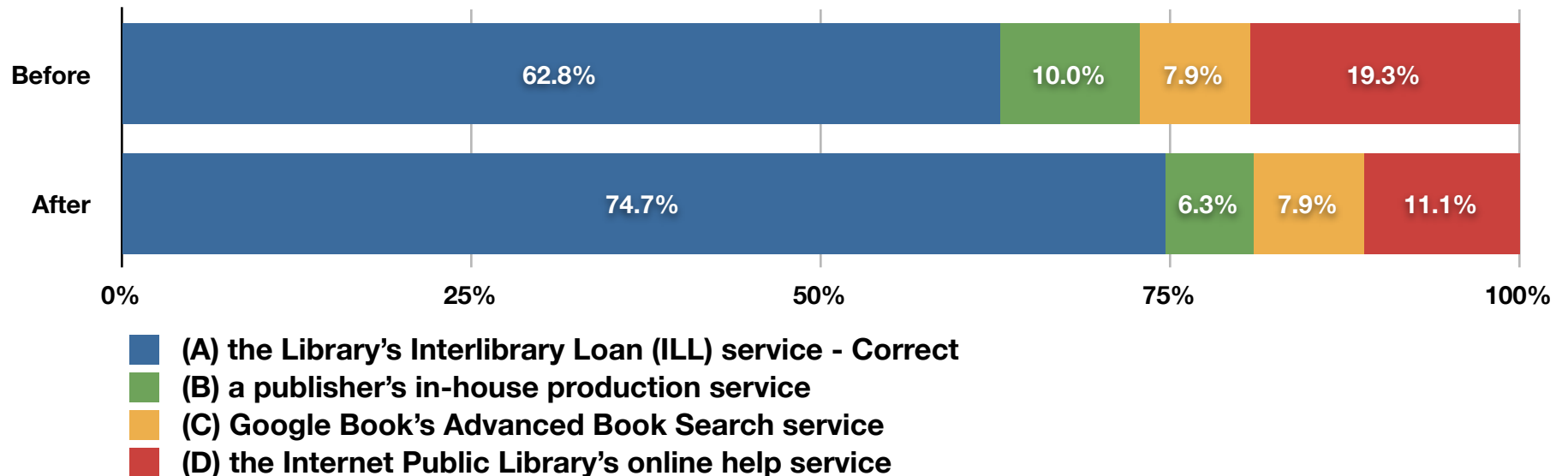


+ More students successfully answered this question in the post-questionnaire (87.2%) than they had in the pre-questionnaire (78.0%).

Students will be able to use available services to obtain desired materials 1.3.a

# Question 30

You find a reference to an academic journal article, but the full text of the article is not available online at UC Merced. What service can you use to obtain a copy free of charge usually within a week?

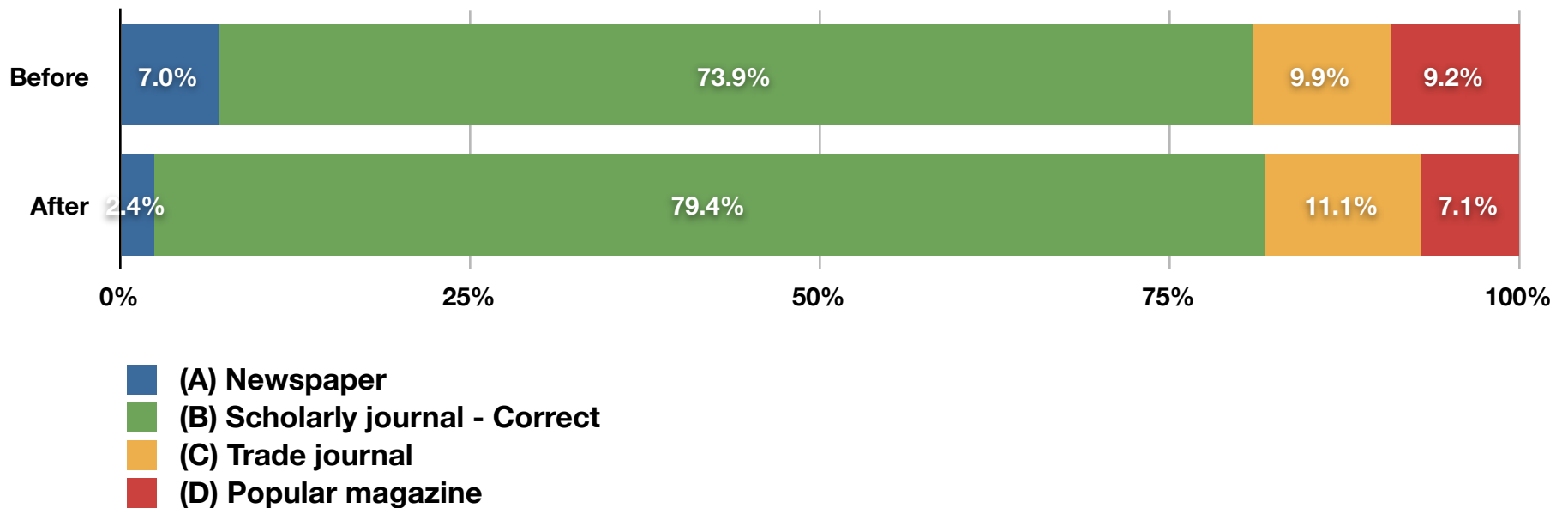


+ More students successfully answered this question in the post-questionnaire (74.7%) than they had in the pre-questionnaire (62.8%).

Students will be able to retrieve information needed 2.3.c. (e.g. download, Interlibrary loan)

# Question 31

What type of publication is *Blood*?

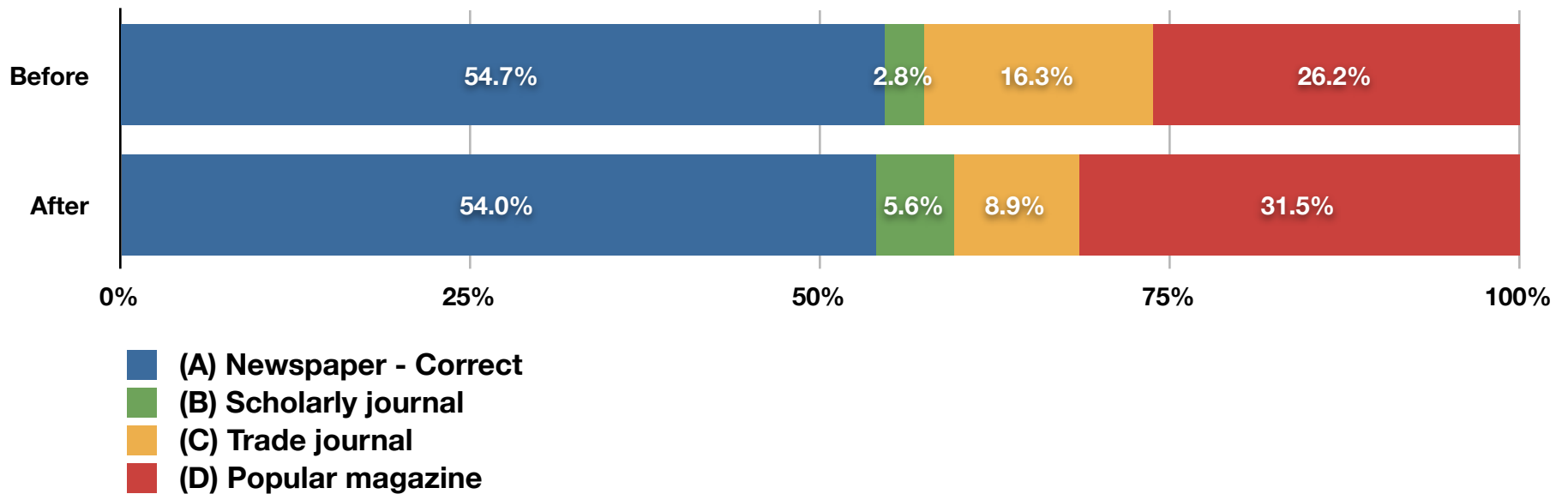


+ More students successfully answered this question in the post-questionnaire (79.4%) than they had in the pre-questionnaire (73.9%). They identified the publication type through a description.

Students will be able to identify characteristics of scholarly and popular materials 1.2.d

# Question 32

What type of publication is *The Arizona Republic*?

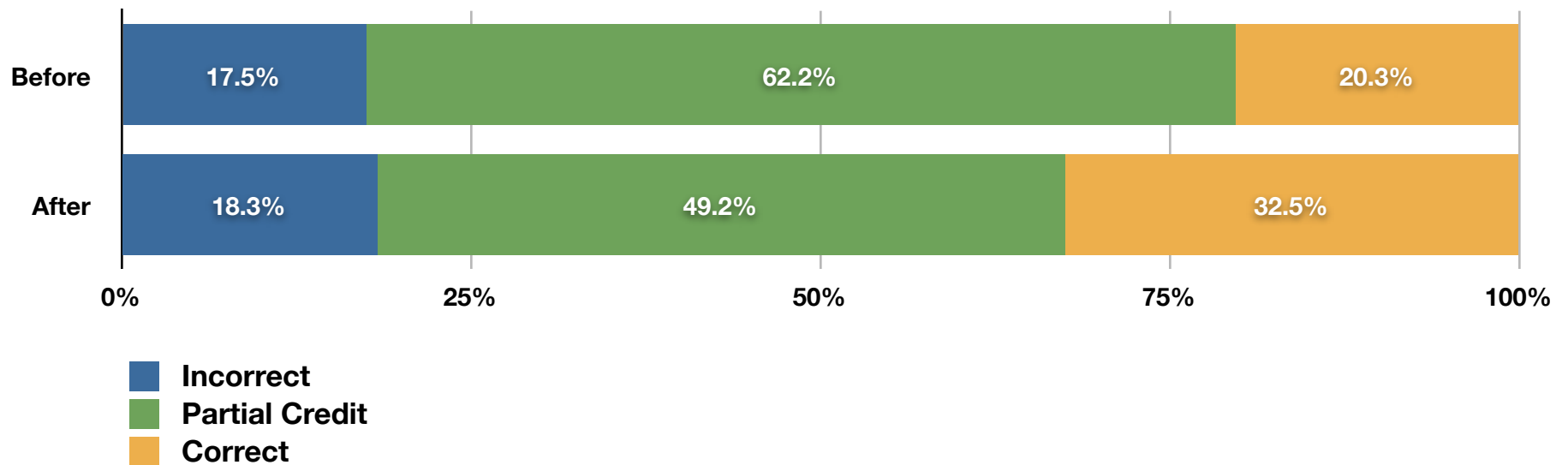


- Fewer students successfully answered this question in the post-questionnaire (54.0%) than they had in the pre-questionnaire (54.7%). However, the correct response rate from both questionnaires was very similar.

Students will be able to identify characteristics of scholarly and popular materials 1.2.d

# Question 33

Identify which of the following are typical characteristics of a scholarly publication.



+ A greater number of students correctly answered this question in the post-questionnaire (32.5%) than they had in the pre-questionnaire (20.3%). Students were given prompts (of scholarly or popular articles) and had to select ONLY and ALL correct prompts to count as Correct.

Students will be able to identify characteristics of scholarly and popular materials 1.2.d

## ***Writing 10***

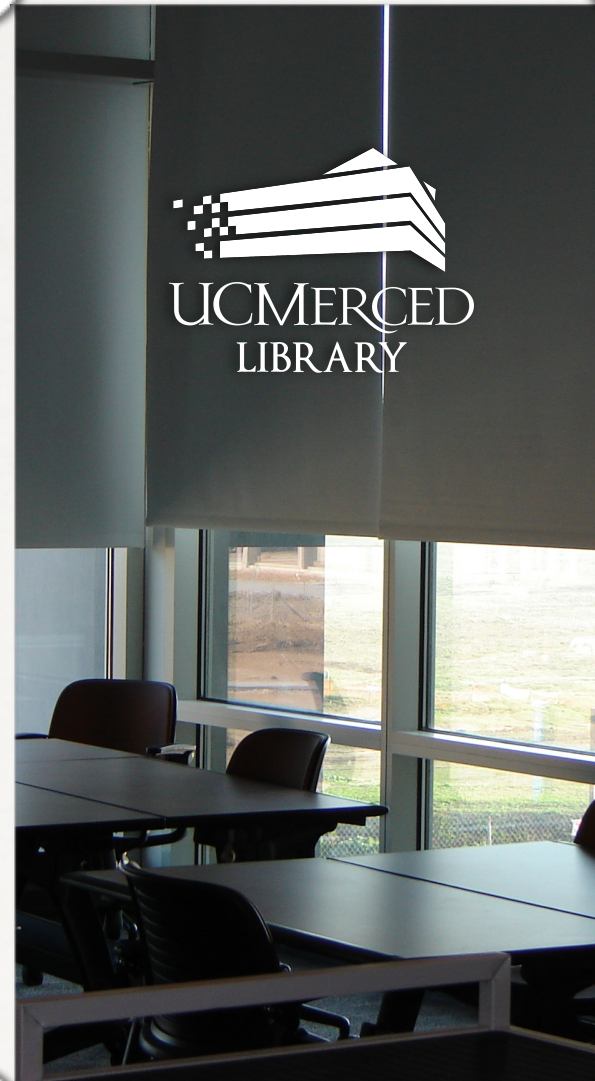
***College Writing and Composition  
Spring 2010***

# ***Library Training Questionnaire***

### ***Part II :***

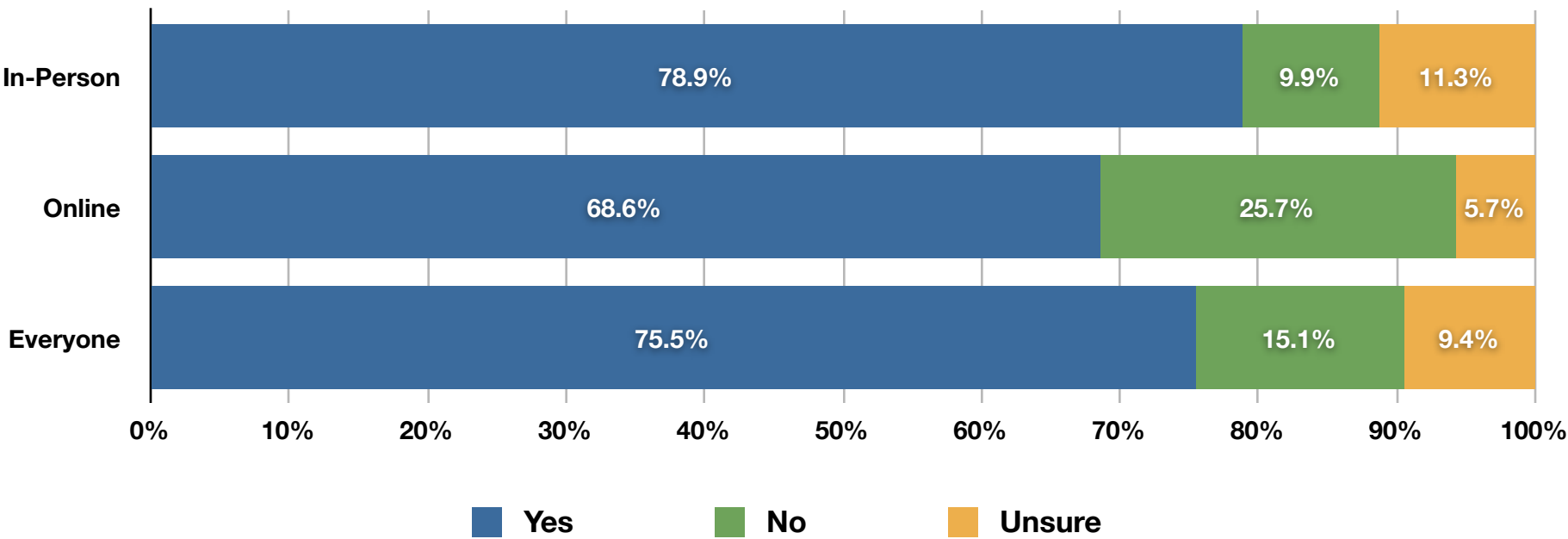
***Questions 41 - 77***

***Comparing Post-Questionnaire Responses  
Between In-Person and Online  
Respondent Groups***



# Question 41

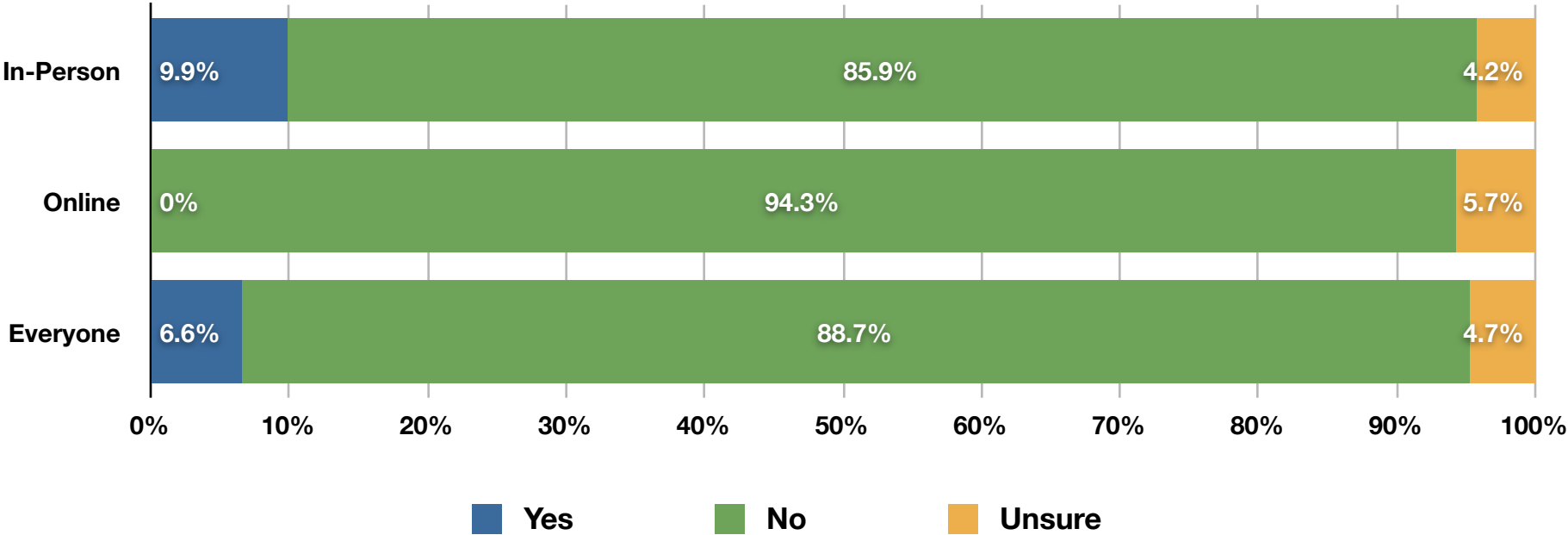
I found full-text articles through the UC Merced Library’s online databases for my Writing 10 paper(s).



The in-person respondent group was more likely than the online respondent group to have found full-text articles through UC Merced Library online databases.

# Question 42

I ordered one or more articles through the Interlibrary Loan Services for my Writing 10 paper(s).

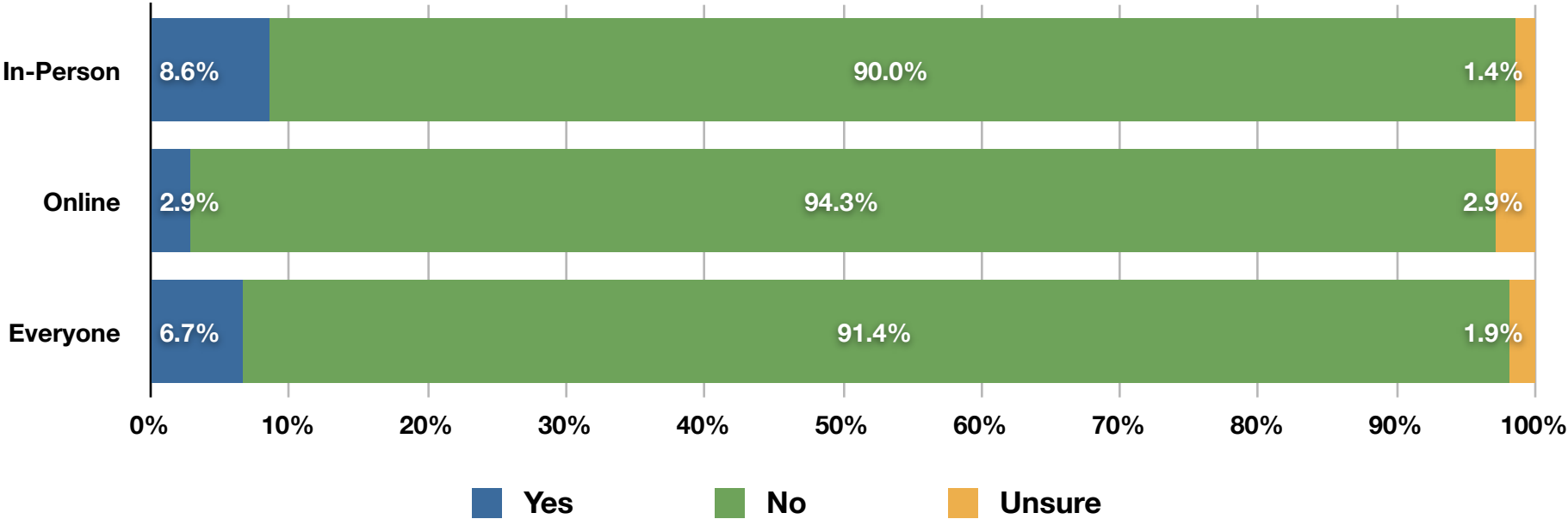


Approximately 10% of the in-person respondent group did use Interlibrary Loan services to obtain **articles** while no-one from the online respondent group used this service for this purpose.



# Question 43

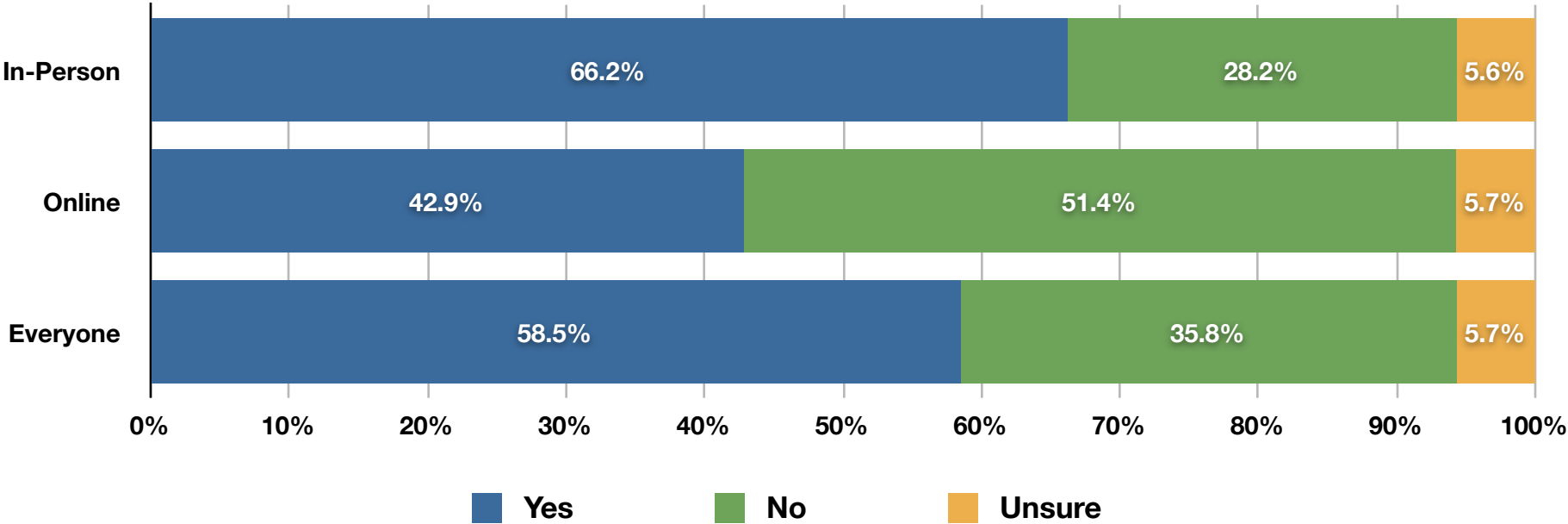
I ordered one or more books through the Interlibrary Loan Services for my Writing 10 paper(s).



While 8.6% of the in-person respondent group used Interlibrary Loan services to obtain **books** only 2.9% of the online respondent group used this services for book borrowing.

# Question 44

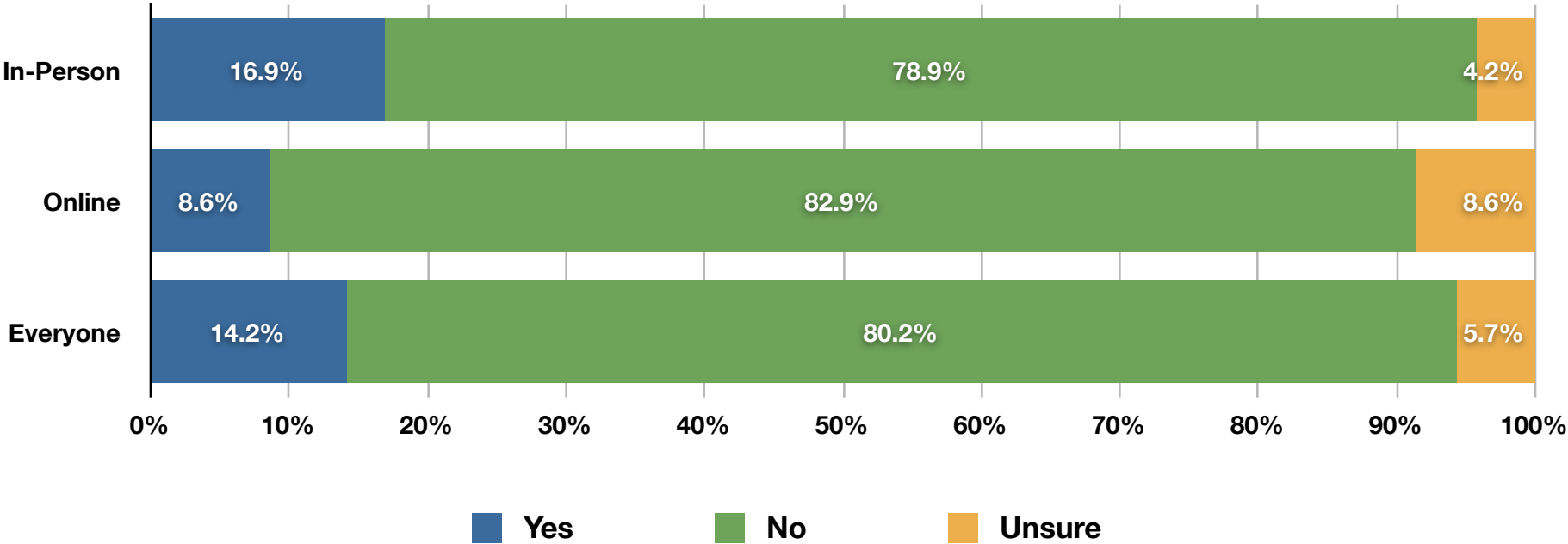
I viewed a minimum of one online book available through the UC Merced Library for my Writing 10 paper(s).



Respondents from the in-person group were more likely to have viewed an ebook through the UC Merced Library for their Writing 10 paper than were respondents from the online group.

# Question 45

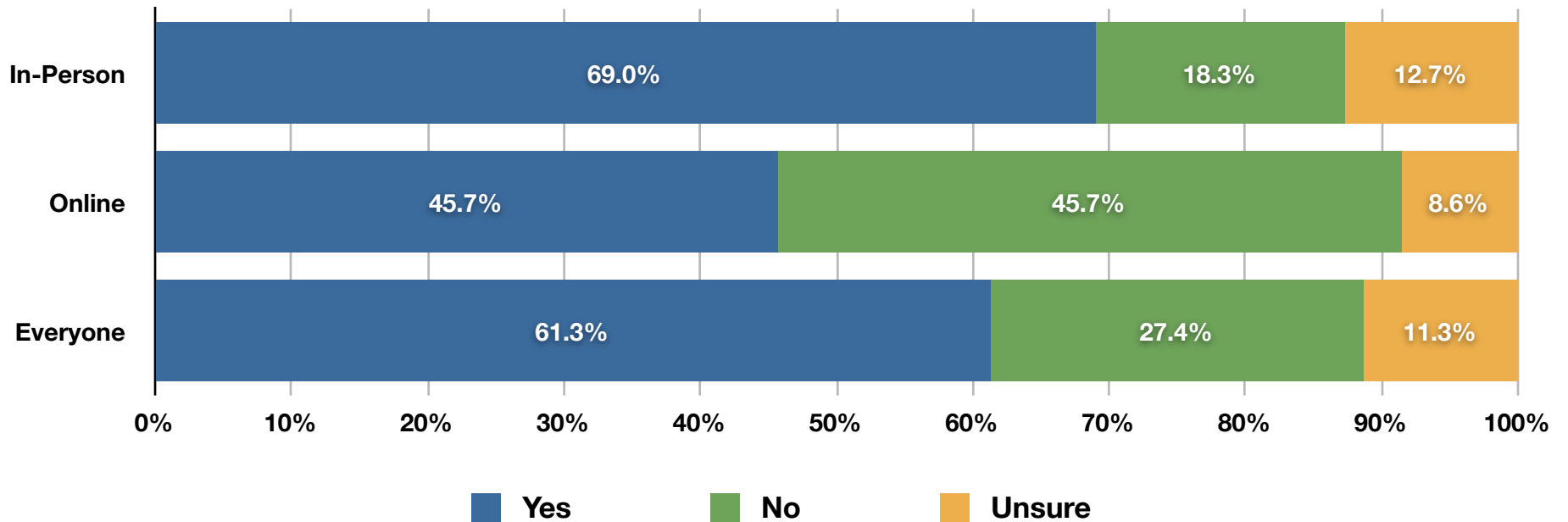
I checked out a minimum of one book from the UC Merced Library for my Writing 10 paper(s).



Respondents from the in-person group were more likely to have checked out a print item from the UC Merced Library for their Writing 10 paper than were respondents from the online group.

## Question 46

I searched Academic Search Complete (EBSCO) for my Writing 10 paper(s).

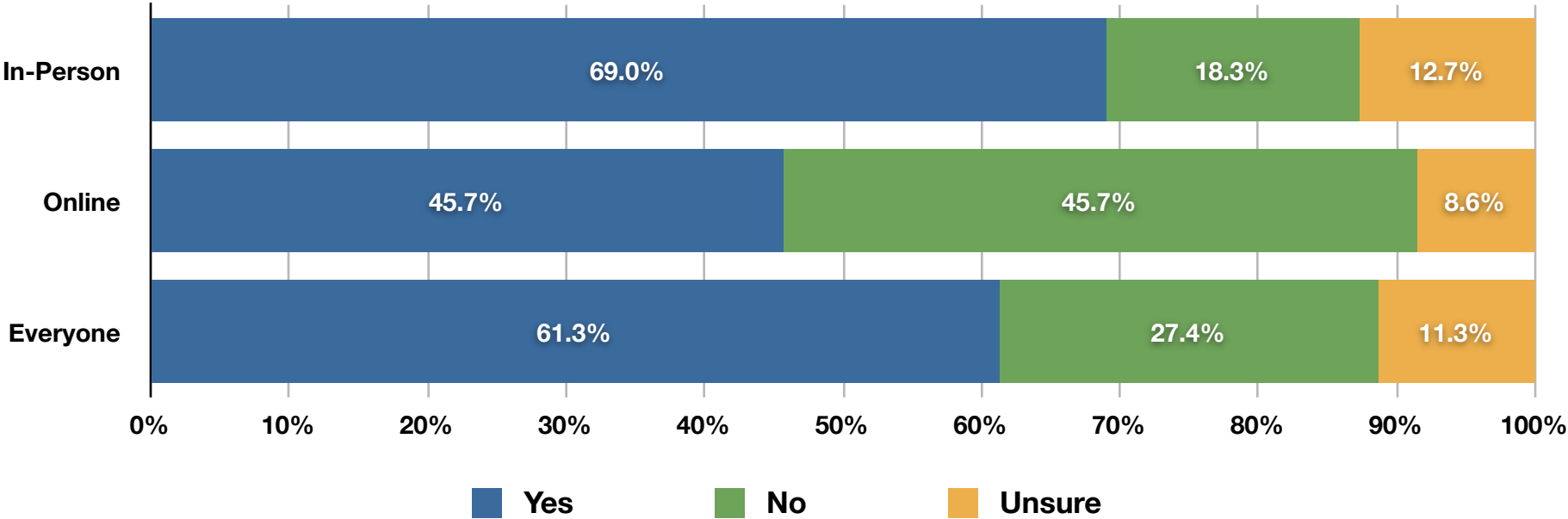


Respondents from the in-person group were more likely to have searched Academic Search Complete (EBSCO) for their Writing 10 paper than were respondents from the online group.

Note: This was one of four significant responses based on statistical calculations.

# Question 47

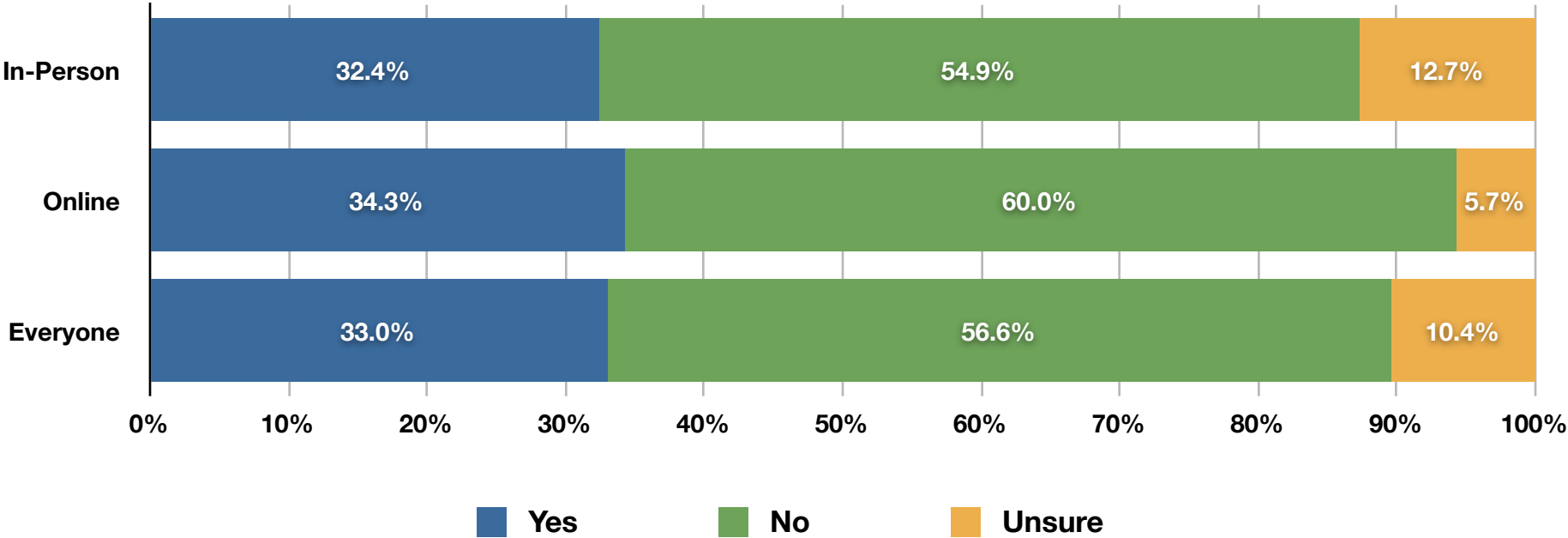
I searched Google Scholar for my Writing 10 paper(s).



Respondents from the in-person group were more likely to have searched Google Scholar for their Writing 10 paper than were respondents from the online group.

# Question 48

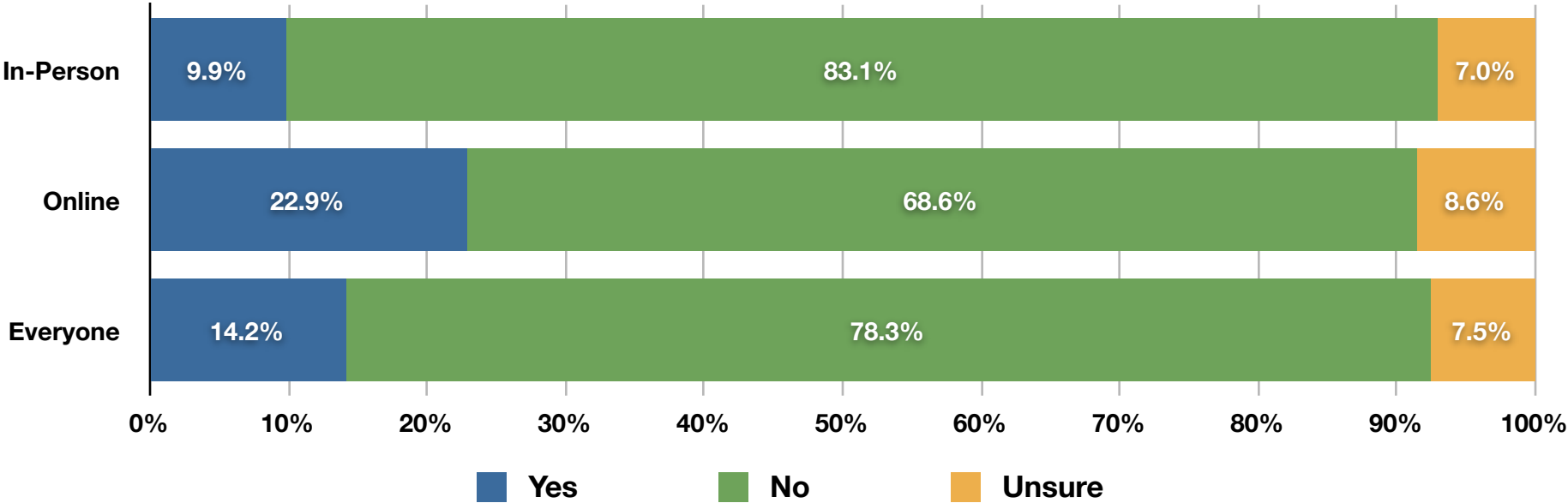
I searched Next Generation Melvyl Pilot (UC catalog) for my Writing 10 paper(s).



Respondents from the online group were a little more likely to have searched the Next Generation Melvyl Pilot (UC catalog) for their Writing 10 paper than were respondents from the online group.

# Question 49

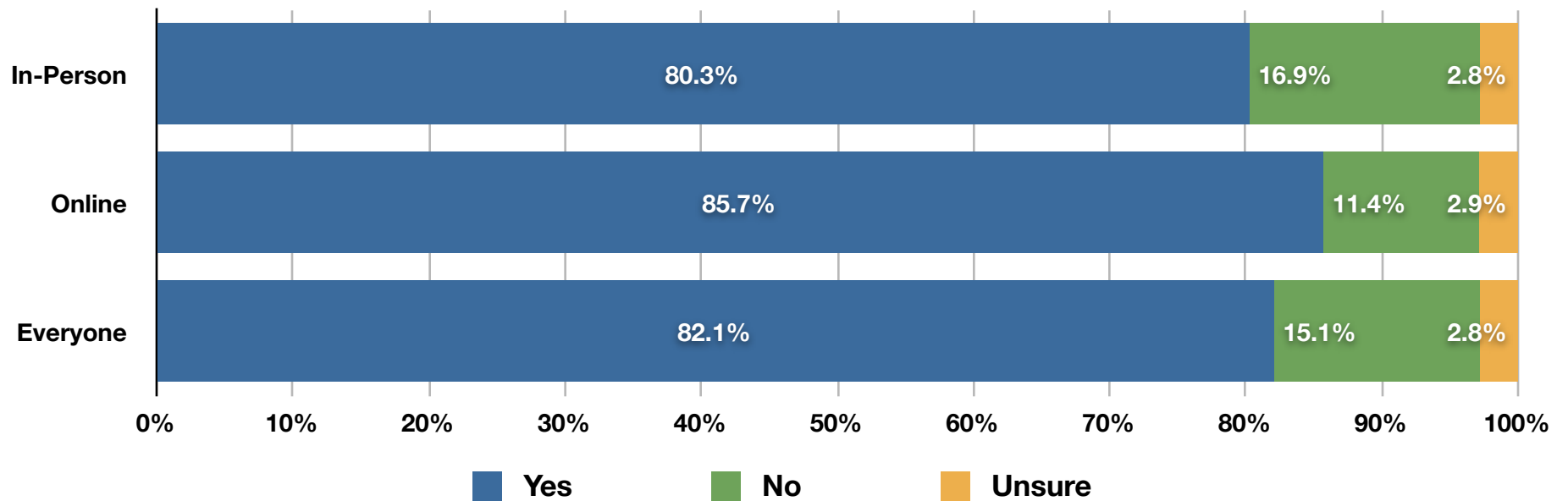
I did not search any library databases or catalogs for my Writing 10 paper(s).



A greater percentage of respondents from the online group (22.9%) indicated that they did not search any library databases or catalogs for their Writing 10 paper in contrast to almost 10% of respondents from the in-person group.

## Question 50

I used a web search engine e.g. Google, Yahoo etc. for my Writing 10 paper(s).

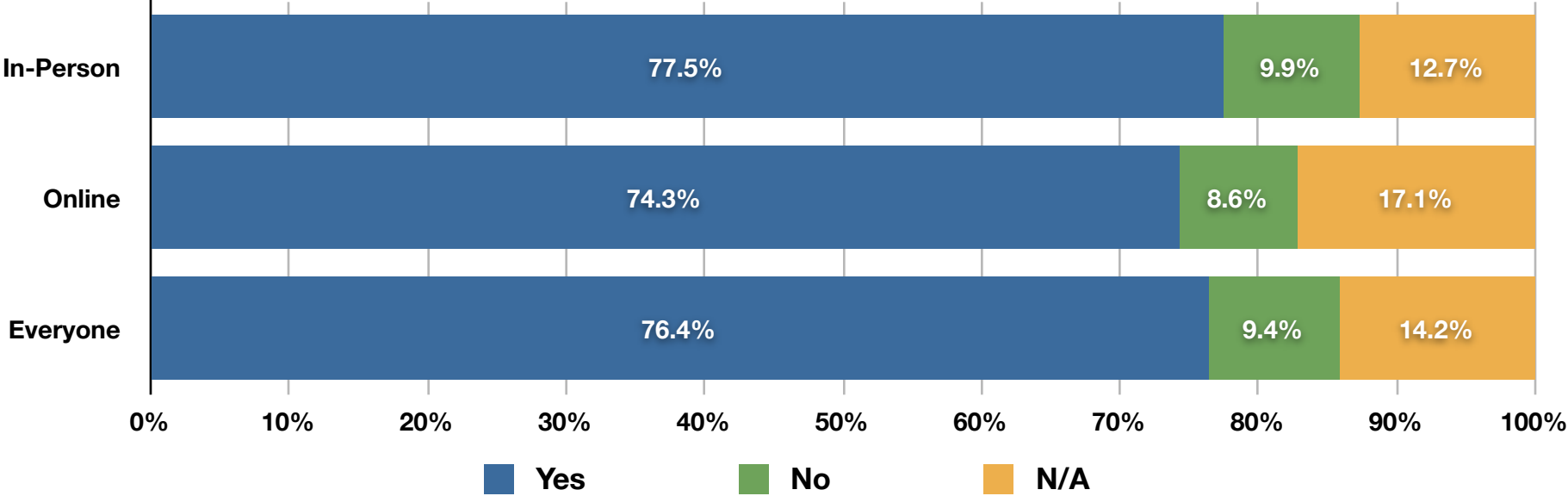


A much higher percentage of respondents from both the in-person and online groups indicated that they had used a web search engine such as Google, Yahoo etc. for their Writing 10 paper. Overall, students are much more likely to use the free web than library provided resources/search tools.



# Question 51

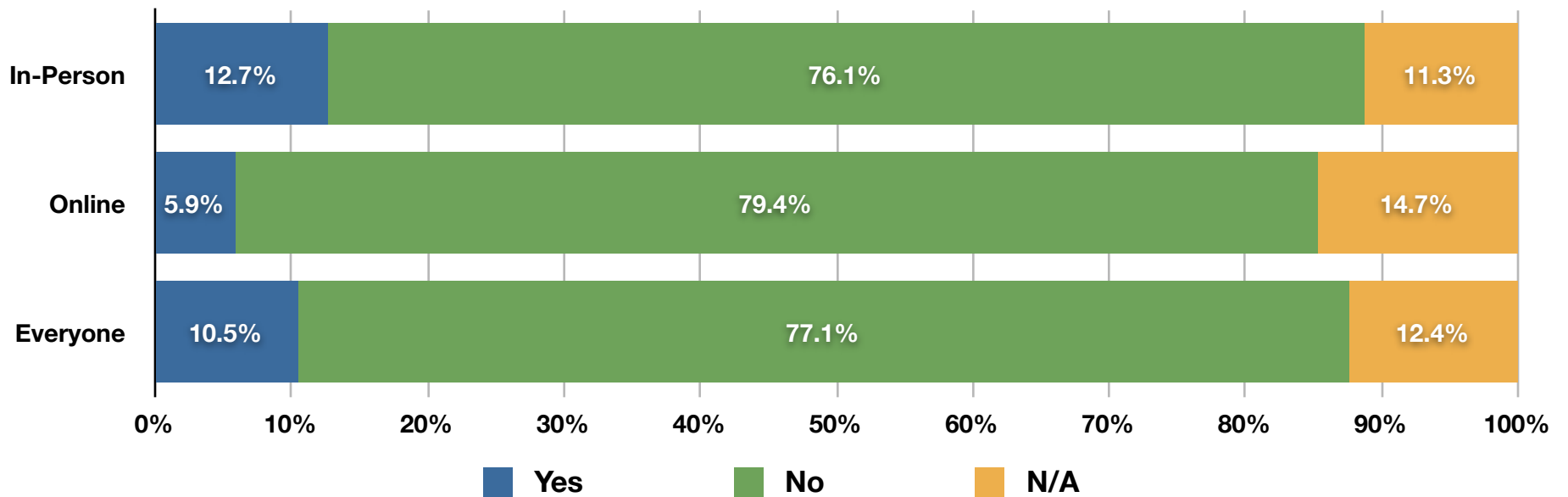
I was able to determine if an article was either scholarly or popular.



Overall, 76.4% of respondents (in-person and online) indicated that they were able to determine if an article was either scholarly or popular while 14.2% indicated that this was not applicable for them. This left almost 10% of respondents who were not able to make this determination.

## Question 52

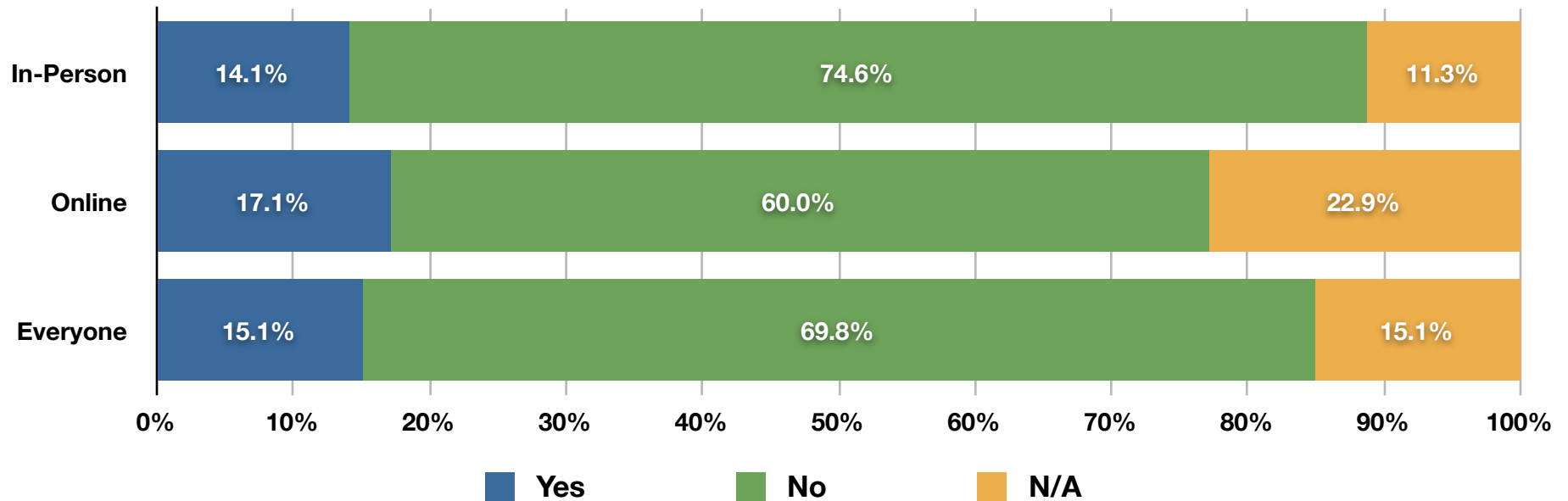
I used Ulrich's International Periodicals Directory to determine if an article was either scholarly or popular.



Perhaps not surprisingly, a small percentage of respondents (10.5% overall) used Ulrich's International Periodicals Directory to determine if an article was either scholarly or popular. Respondents from the in-person group (12.7%) were more likely to use Ulrich's than respondents from the online group (5.9%).

## Question 53

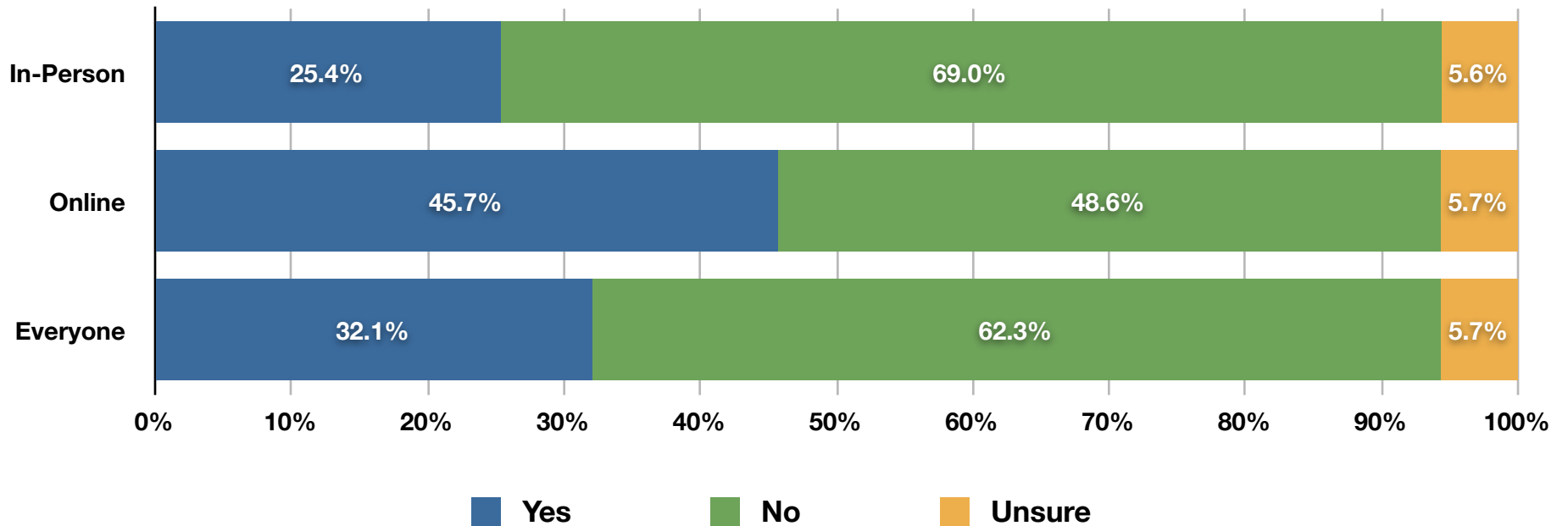
I referred to the Library's handout on "Distinguishing Between Various Periodicals" to determine whether articles were popular or scholarly.



Approximately 70% of respondents did not refer to the library's handout on "Distinguishing Between Various Periodicals" leaving approximately ~15% who did and another ~15% who noted it was not applicable. Respondents in the online groups were more likely than those respondents in the in-person group to have referred to the handout. Overall, respondents were more likely to refer to this handout than they were to refer to the Ulrich's Periodicals Directory but both received low use.

## Question 54

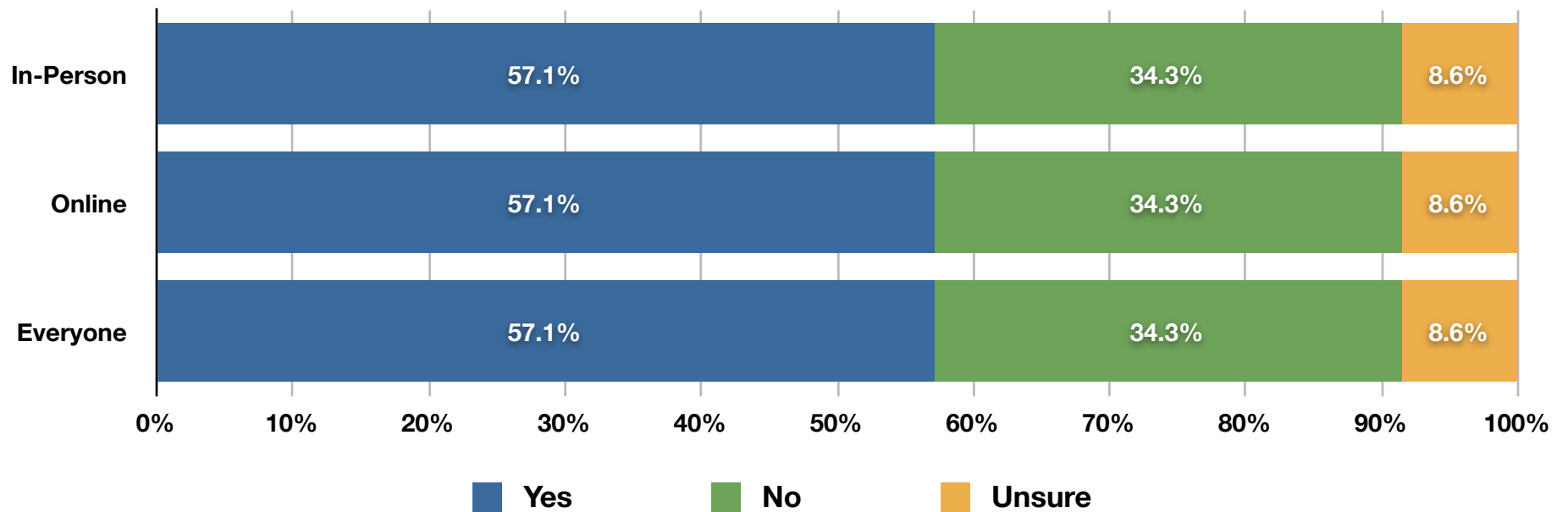
I viewed the Library's online tutorial on "Distinguish Between Popular and Scholarly Articles" to determine whether articles were popular or scholarly.



It may not be surprising that more respondents from the online group than respondents from the in-person group referred to the Library's online tutorial on "Distinguish Between Popular and Scholarly Articles" to determine where articles were popular or scholarly since the online group already watched it once as part of their original online library instruction.

## Question 55

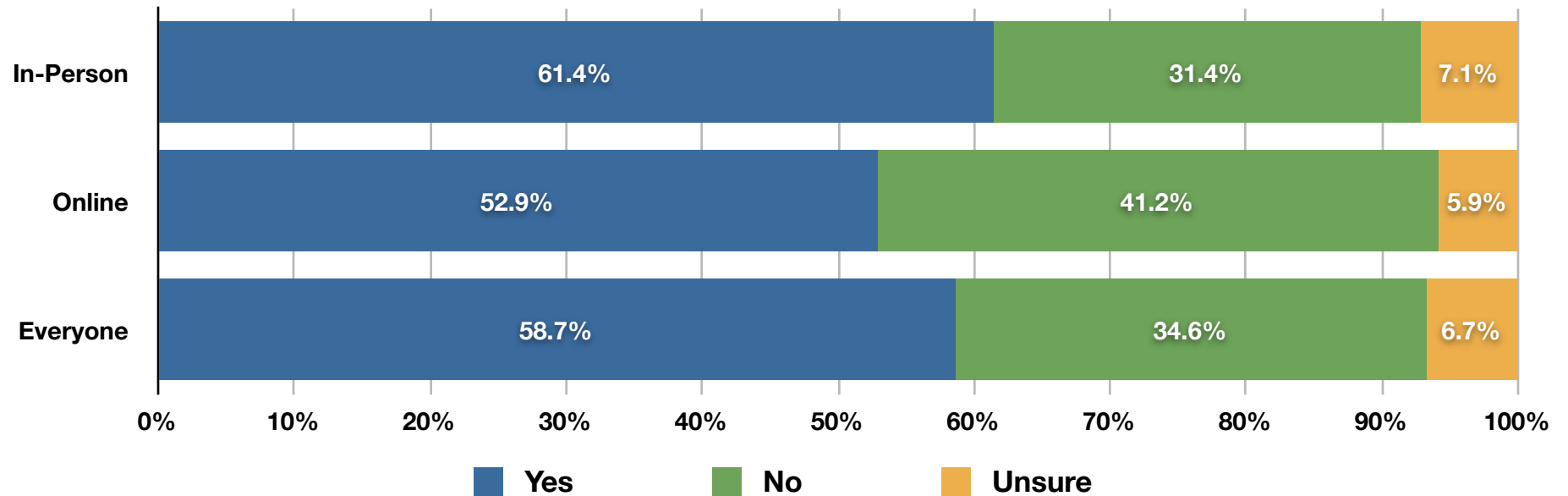
I used limits in databases (e.g. the limit to peer-reviewed articles) to find scholarly information.



Both groups used limits in databases to narrow results to scholarly information at the same rates (57.1%).

## Question 56

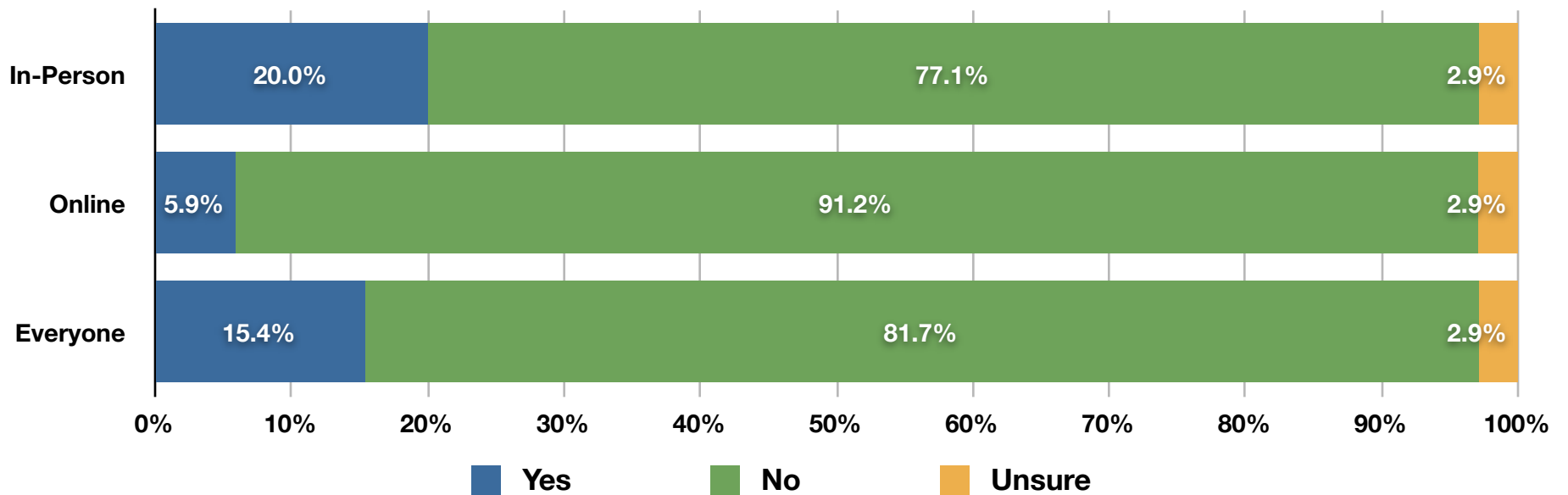
During the semester, I examined the bibliography or footnotes of an article or book to find references to other information that would be useful to me.



Over half the respondents in each group examined the bibliography or footnotes of an article or book to find references to other information that would be useful to them. The respondents in the in-person group did this at a higher rate (61.4%) than did those in the online group (52.9%).

## Question 57

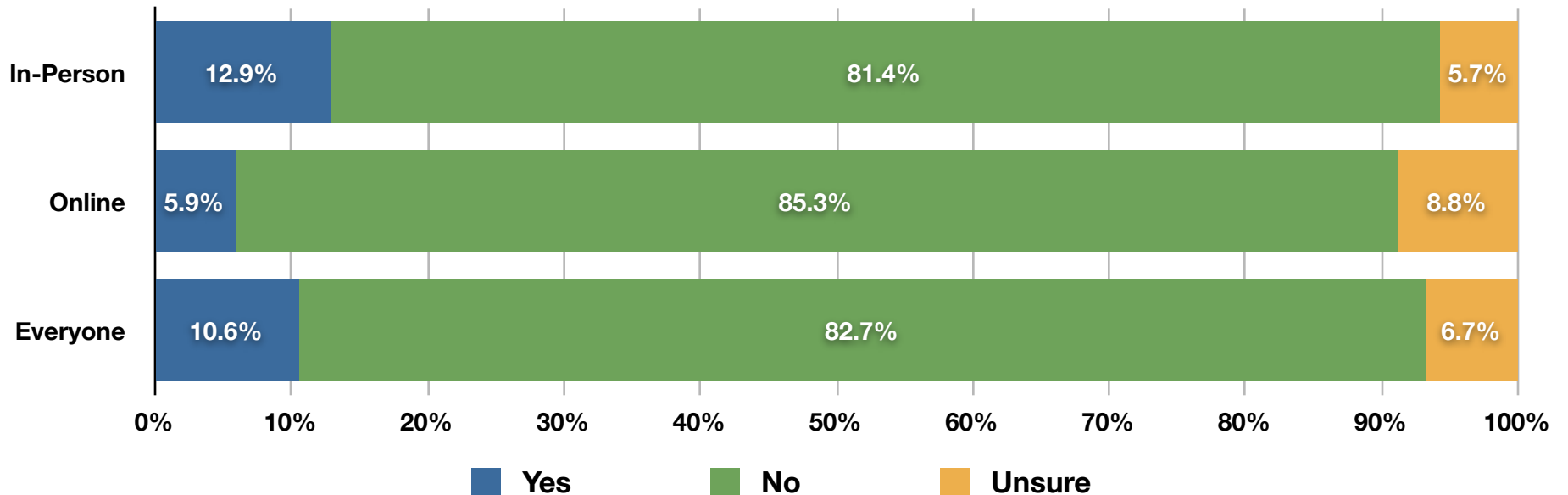
I visited a librarian for research help before my final research paper was due.



Respondents from the in-person group (20.0%) were much more likely than respondents from the online group (5.9%) to visit a librarian for research help before their final research paper was due. The majority of respondents did not visit a librarian for additional assistance.

## Question 58

I asked for assistance from one of the Roving Reference Students Assistants in the library (students wearing red shirts) for my Writing 10 paper(s).

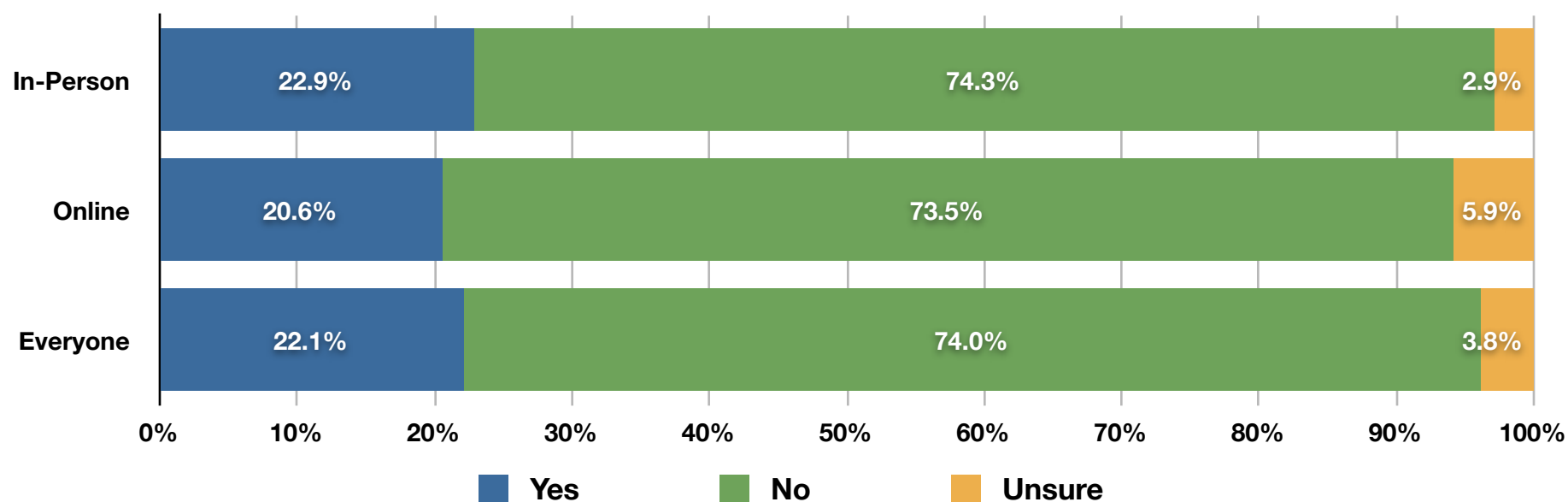


Respondents from the in-person group (12.9%) were more likely than respondents from the online group (5.9%) to ask for assistance, regarding their Writing 10 paper, from one of the Roving Reference Student Assistants in the library. The majority of respondents did not ask a Roving Reference Student Assistant for help.



## Question 59

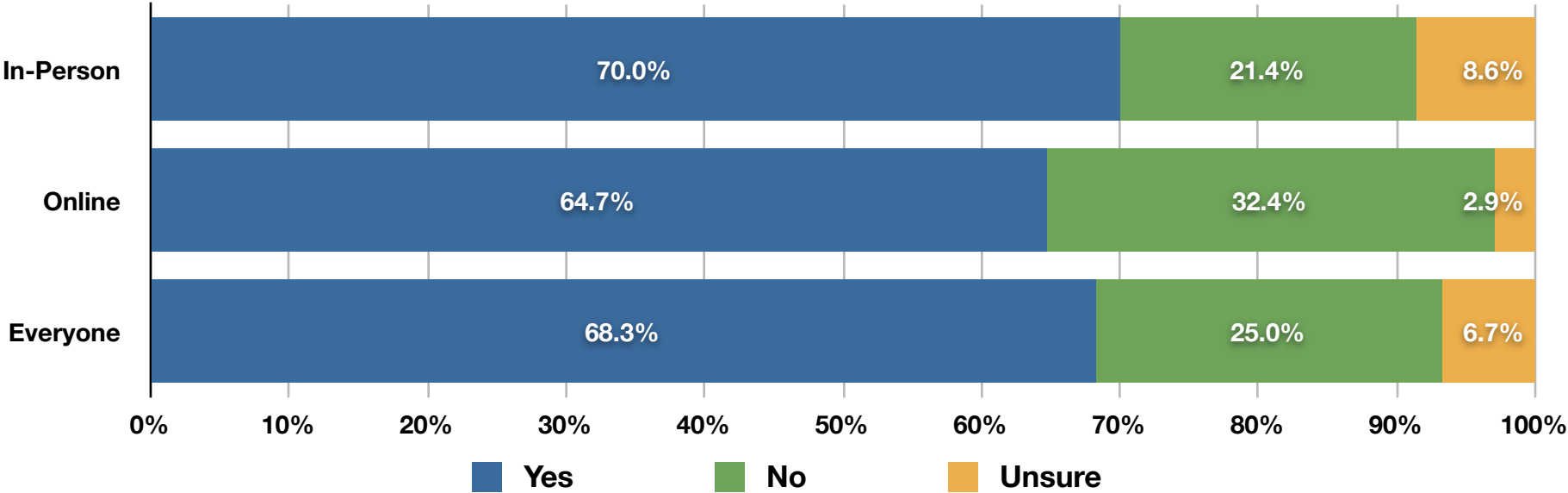
I contacted the Library staff for research help? E.g. text message, phone, email, chat etc.



Respondents from each group contacted a library staff member for research help (e.g. via text message, phone, email, chat etc.) at similar rates though in-person respondents (22.9%) did more so than the online respondents (20.6%). Overall, over 22% of respondents did contact library staff through one or more of these means.

# Question 60

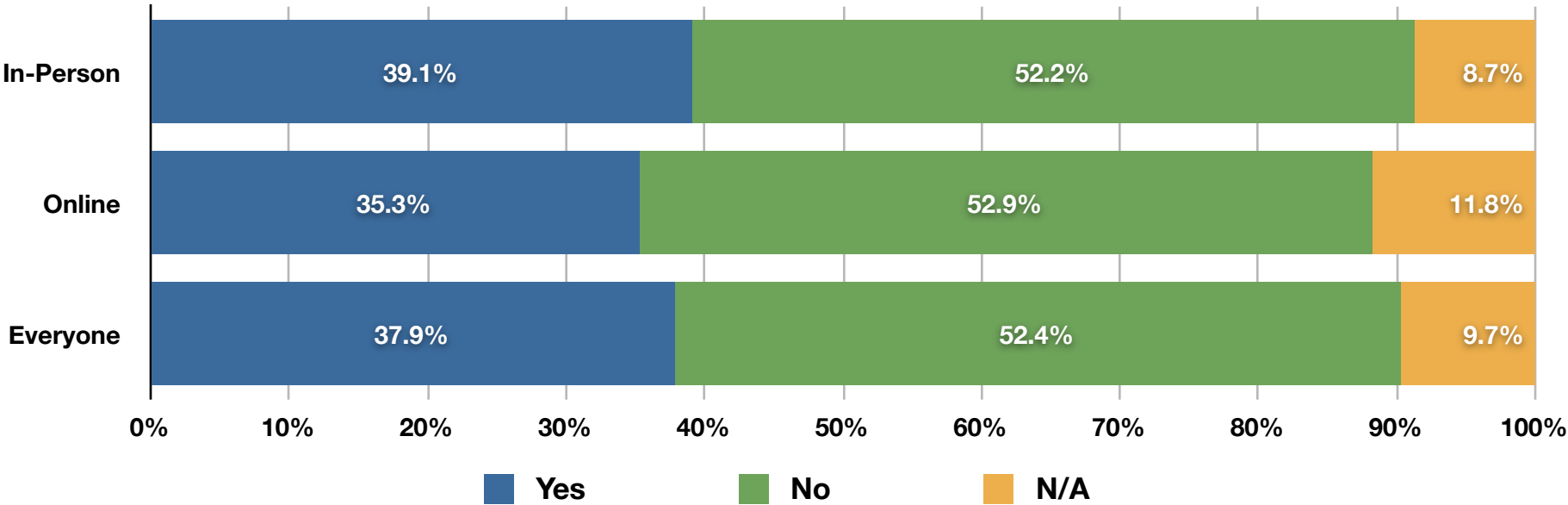
In high school, I received some instruction to help me learn how to use the Library's resources.



Overall, 68.3% of respondents had received some instruction in high school to help them learn how to use library resources.

# Question 61

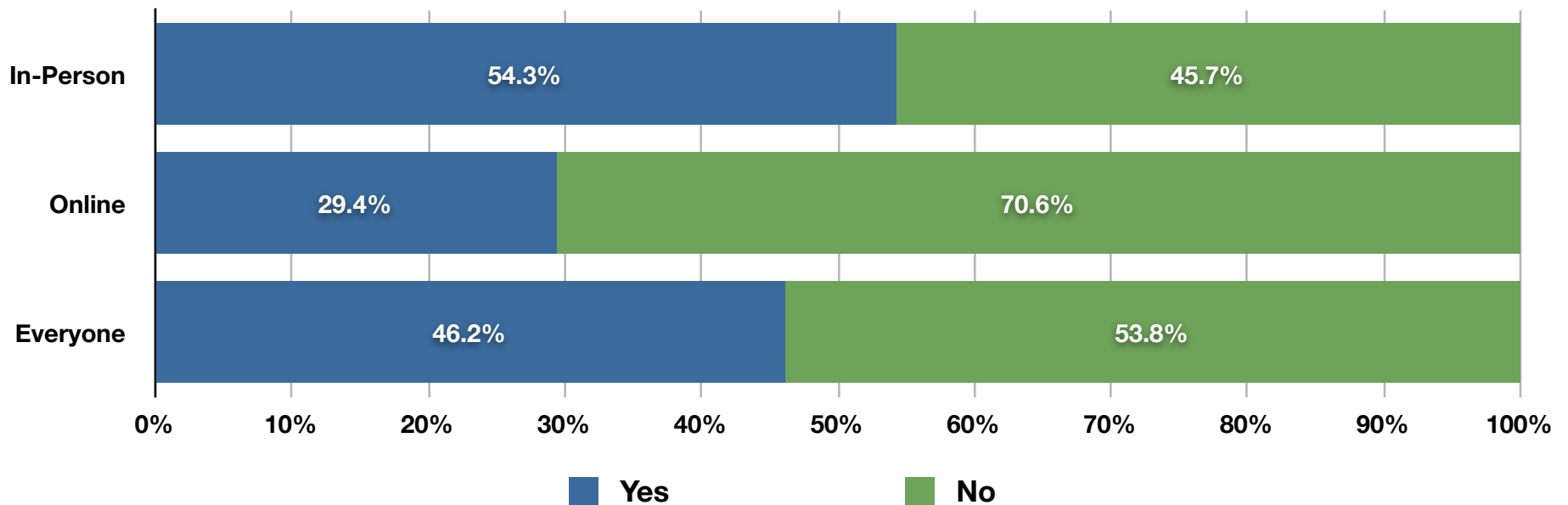
I received in-person library instruction in Writing 1 from Library staff.



More respondents from the in-person group (39.1%) were more likely to have received in-person library instruction in Writing 1 from Library staff than respondents from the online group (35.3%). Overall, almost 38% of respondents had received in-person instruction from Library staff in Writing 1.

## Question 62

I took the iPod Touch Tour and completed the follow-up assignment.



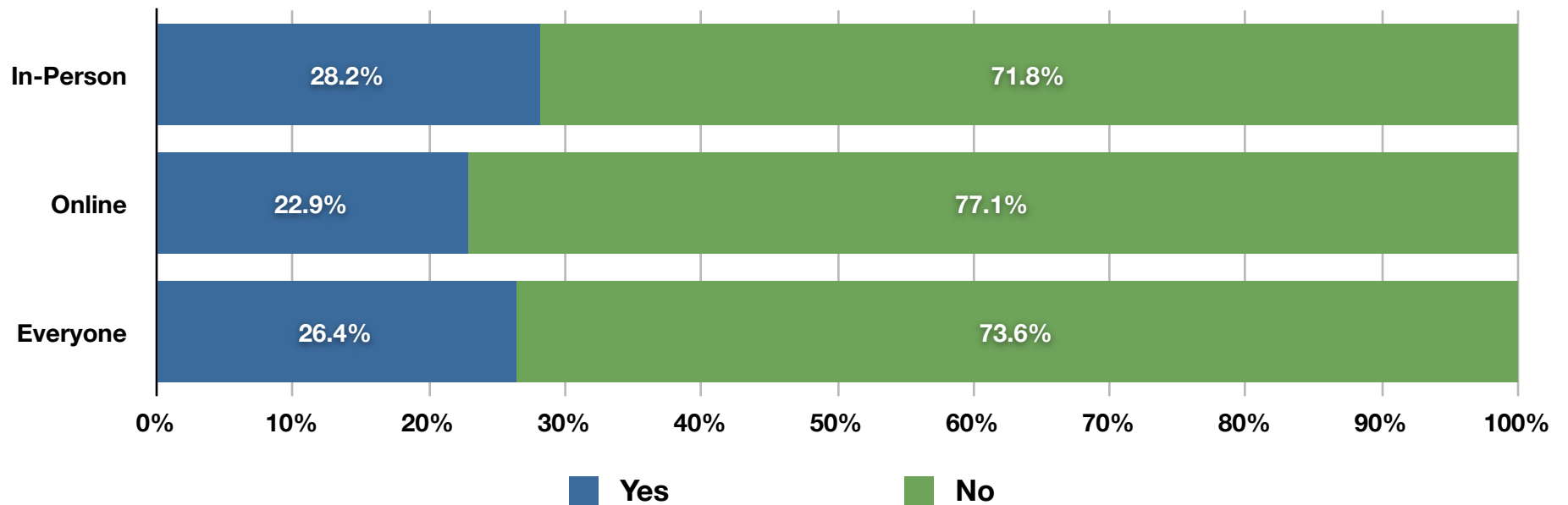
Significantly more respondents from the in-person group (54.3%) took the iPod Touch Tour and completed the follow-up assignment than had respondents from the online group (29.4%).

Note: This was one of four significant responses based on statistical calculations.

Overall, respondents from the in-person group had received more library instruction/information in the past than had the respondents from the online group. Yet, this trend does not continue with question 67.

## Question 63

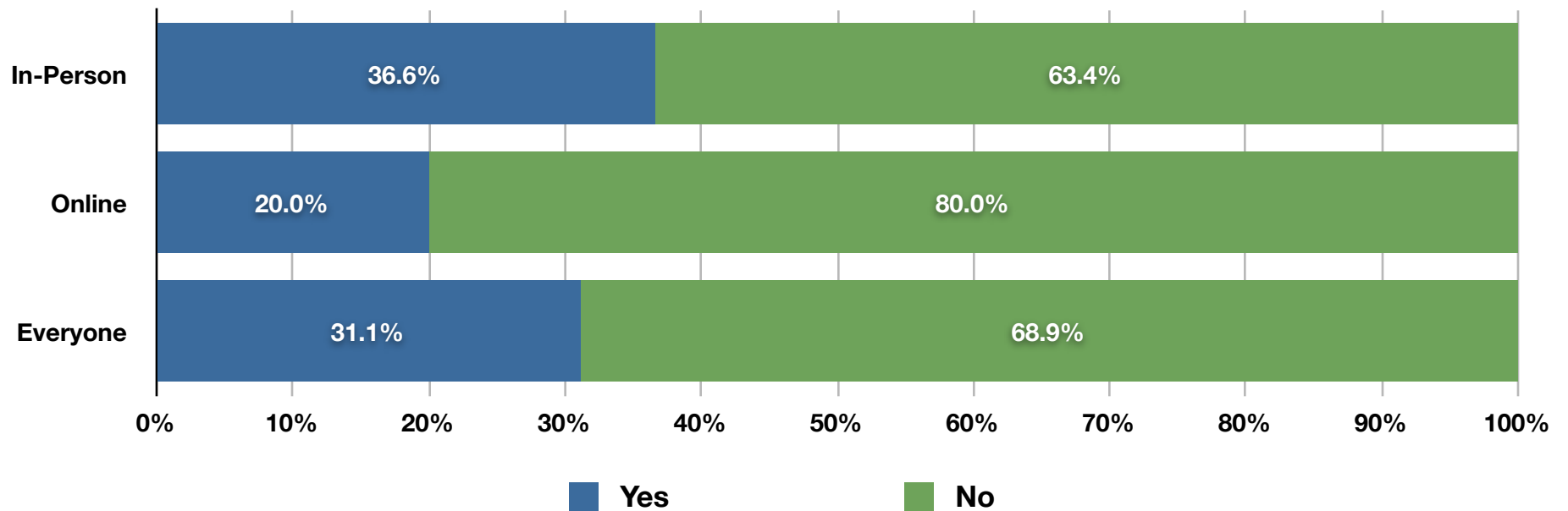
I used RefWorks to create a bibliography for my Writing 10 paper.



Overall, 26.4% of respondents used RefWorks to create a bibliography for their Writing 10 paper. In-person respondents were more likely at 28.2% to do so than online respondents at 22.9%.

## Question 64

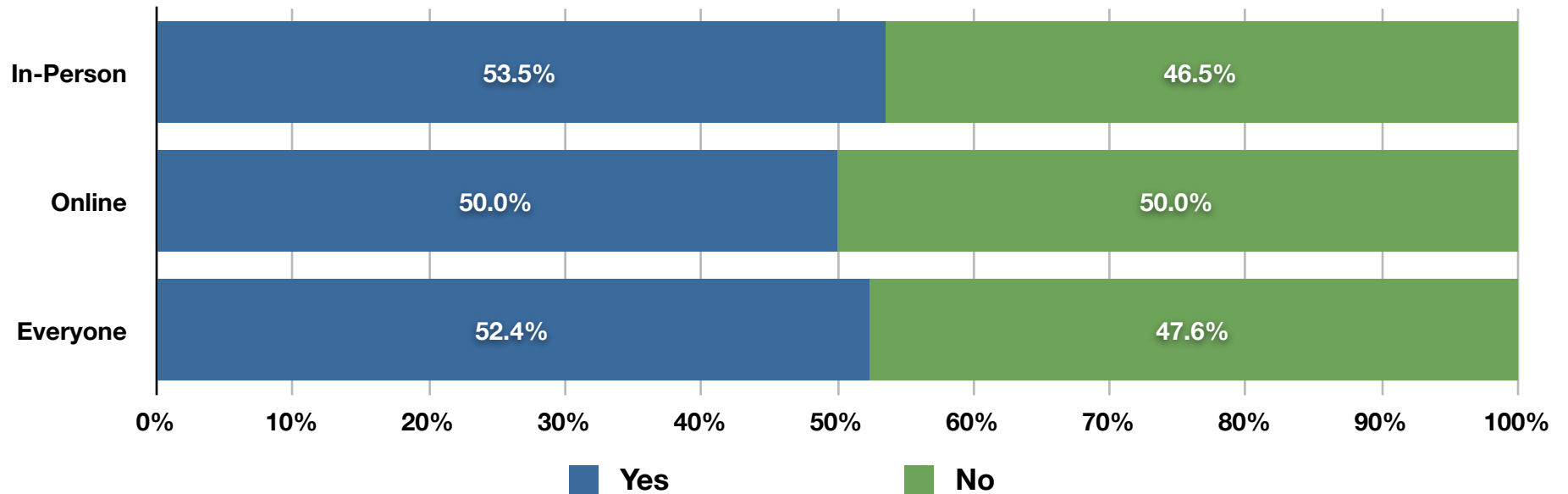
I have attended a RefWorks workshop or class in the library.



Respondents from the in-person group were more likely to have attended a RefWorks workshop in the library than were the respondents from the online group (20.0%). Perhaps this explains why more in-person respondents used RefWorks to create a bibliography (q63) than did online respondents.

## Question 65

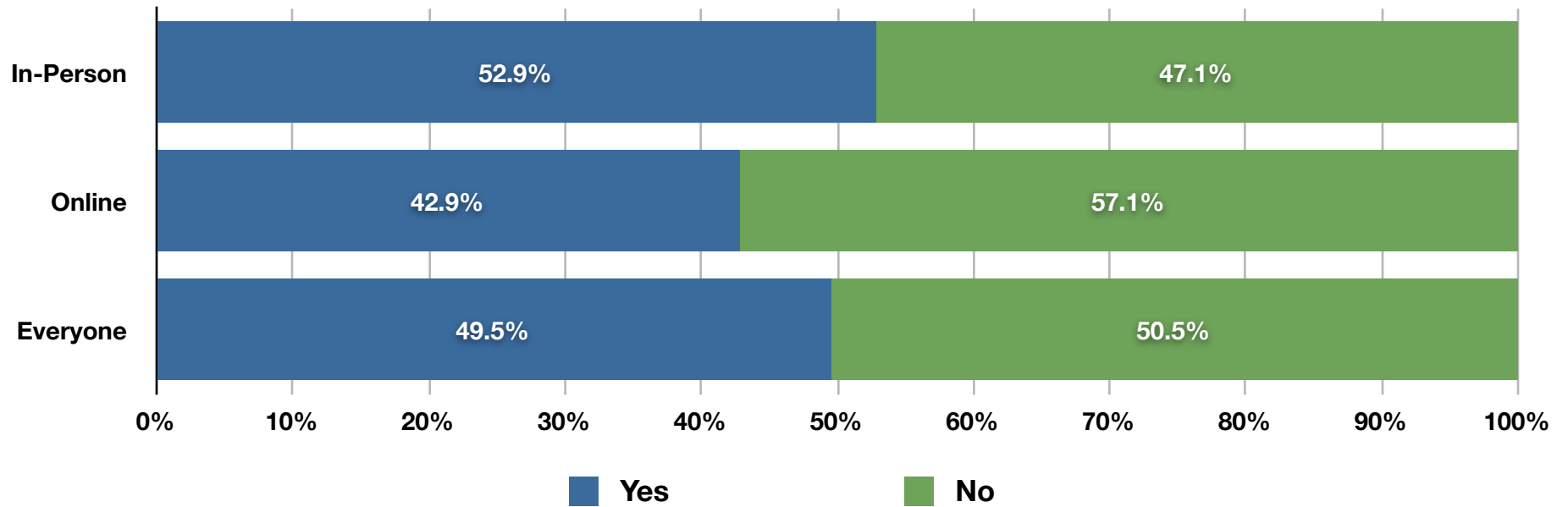
I emailed myself references from catalogs or databases in the format I needed e.g. MLA, APA for my Writing 10 paper(s).



Over 50% of respondents emailed themselves references from catalogs or databases in the format they needed.

## Question 66

I used a tool, other than RefWorks, to create the bibliography for my Writing 10 paper(s). (e.g. EndNote, Zotero, EasyBib, iCite etc.)

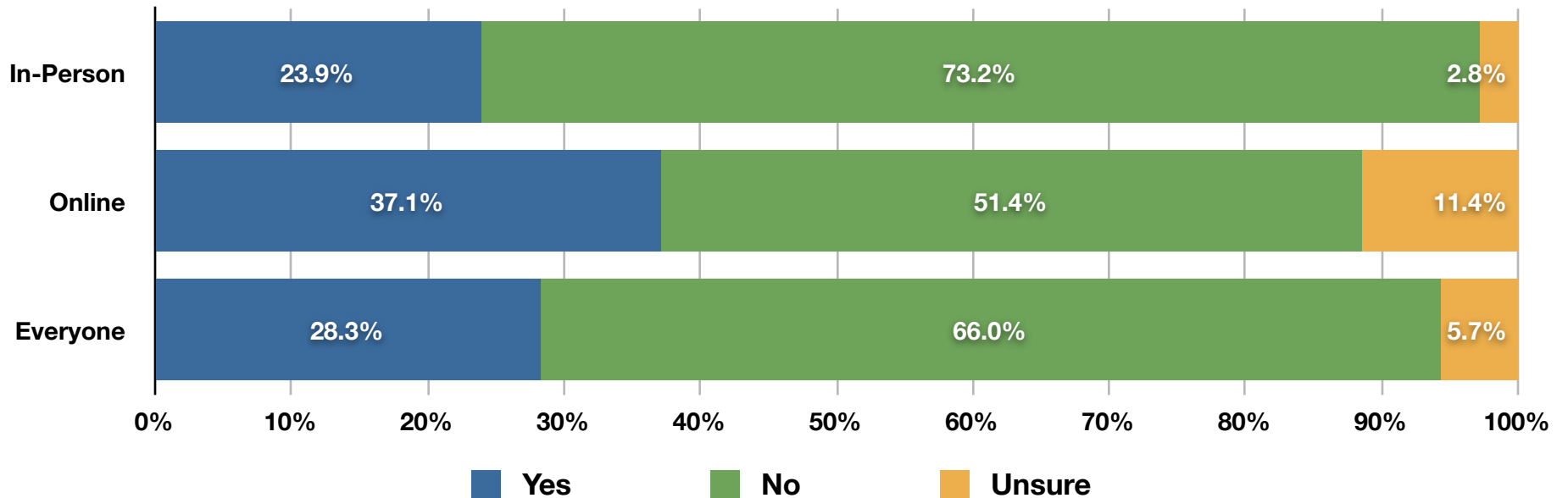


Interestingly, almost 50% of respondents indicated that they used a tool, other than RefWorks, to create a bibliography for their Writing 10 paper(s).



## Question 67

I have received additional library instruction from a librarian in at least one other class at UC Merced that was not a Writing class.

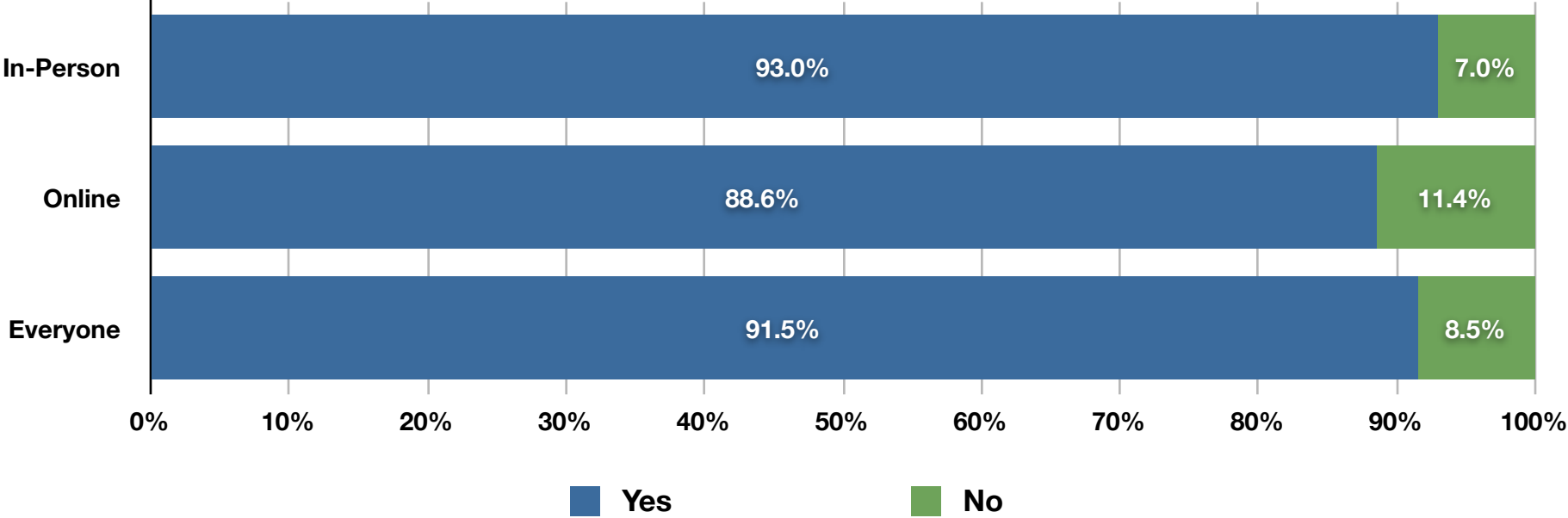


More respondents from the online group (37.1%) indicated that they received library instruction from a librarian in at least one other class at UC Merced that was not a Writing class than did respondents from the in-person groups (23.9%).

Note: This was one of four significant responses based on statistical calculations.

# Question 68

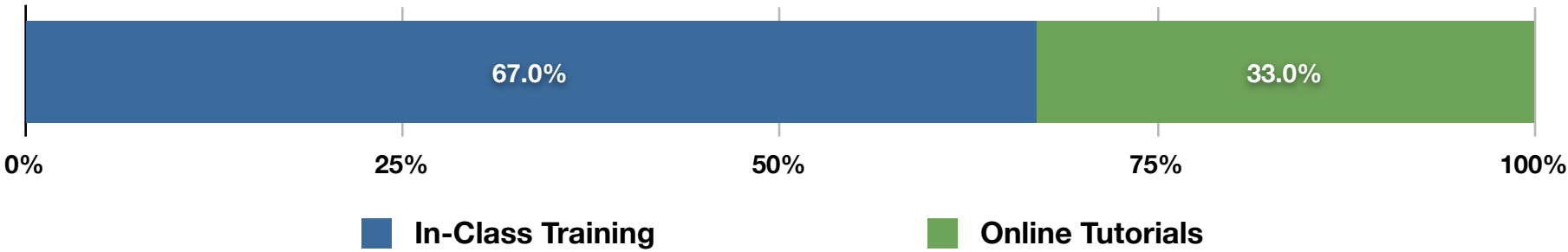
This is my first time taking Writing 10.



Almost 92% of respondents indicated that they were taking Writing 10 for the first time. In-person respondents were more likely to be taking Writing 10 for the first time (93.0%) than were the respondents from the online group (88.6%).

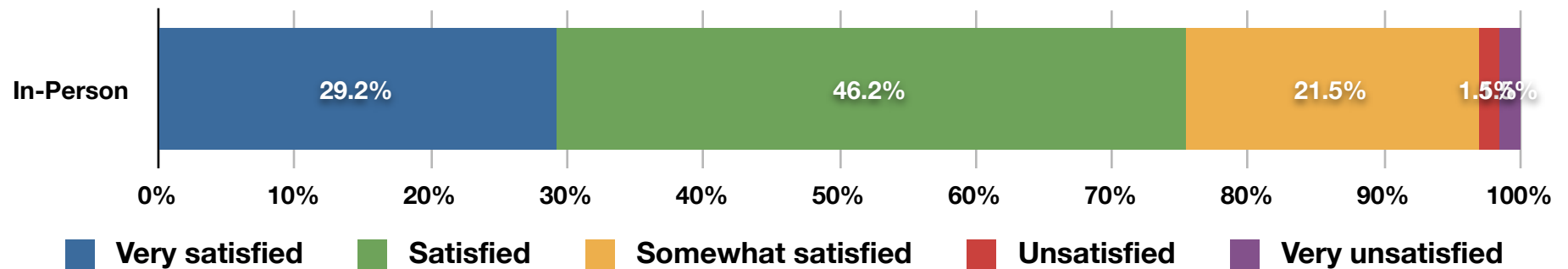
# Question 69

Question 69 asked students to self-identify what type of library instruction they had received in Writing 10.



## Question 70

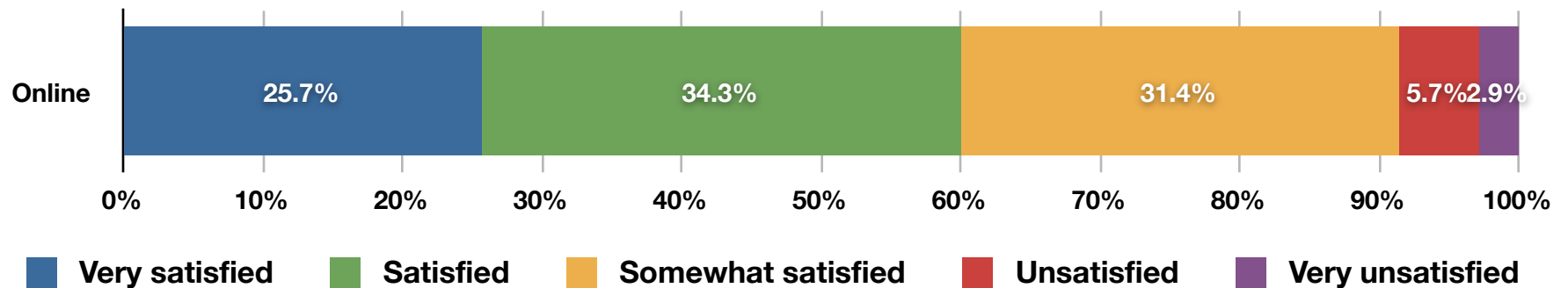
On a scale of 1 to 5, how satisfied were you with the face-to-face library instruction you received in Writing 10?



75.4% of respondents from the in-person group indicated that they were very satisfied or satisfied with face-to-face library instruction they received in Writing 10 while 21.5% indicated that they were somewhat satisfied and 3.1% indicated that they were unsatisfied or very unsatisfied.

## Question 71

On a scale of 1 to 5, how satisfied were you with the online library instruction tutorials you used for Writing 10?



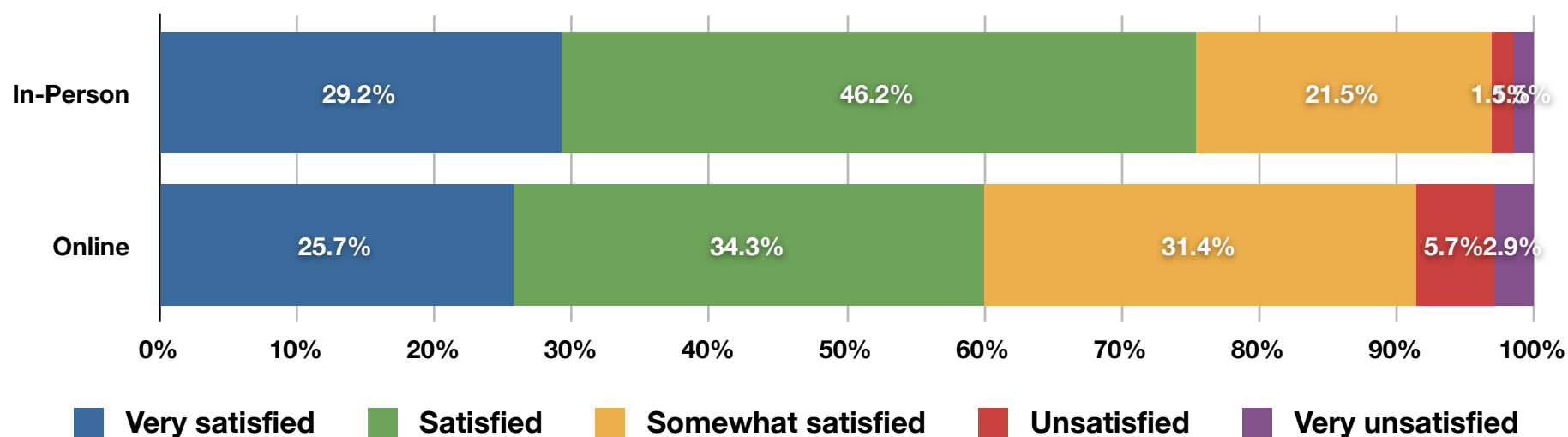
60% of respondents from the online group indicated that they were very satisfied or satisfied with online library instruction tutorials for Writing 10 while 31.4% indicated that they were somewhat satisfied and 8.6% indicated that they were unsatisfied or very unsatisfied.

Respondents who received in-person instruction noted greater satisfaction than those who received online tutorial instruction.

Note: This was one of four significant responses based on statistical calculations. (Questions 70/71)

## Combining Data from Questions 70 - 71

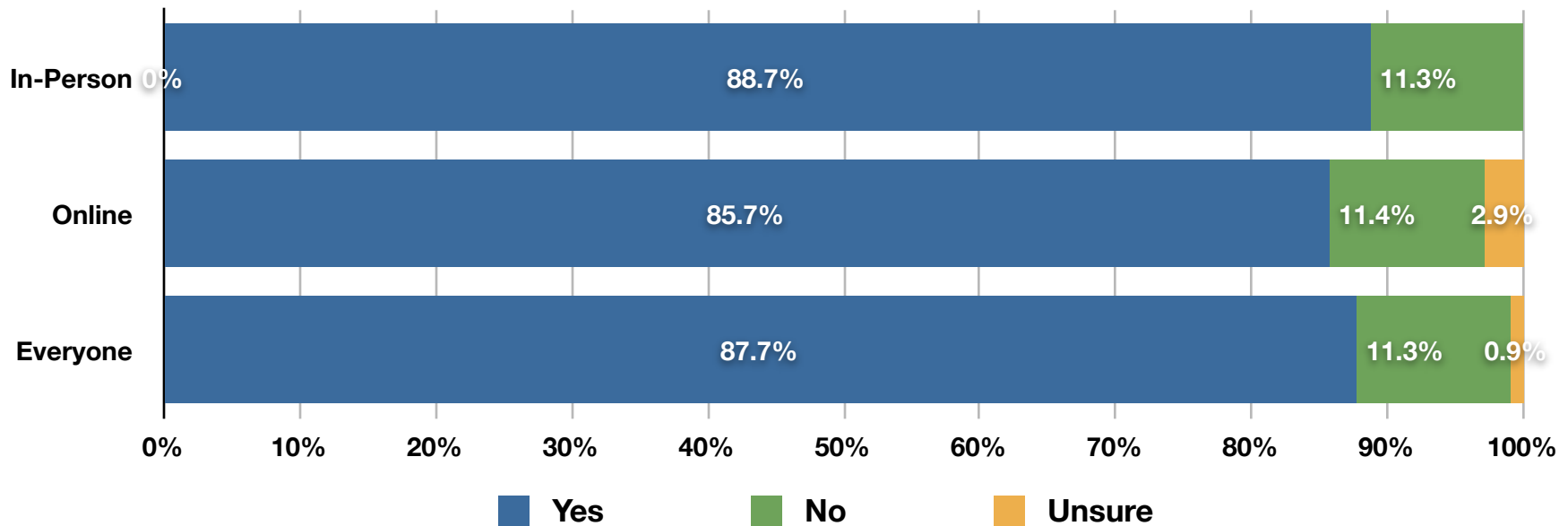
On a scale of 1 to 5, how satisfied were you with the face-to-face library instruction you received in Writing 10?



Respondents from the in-person group (75.4%) were more likely than respondents from the online group (60.0%) to be very satisfied or satisfied with the library instruction they received in Writing 10.

## Question 72

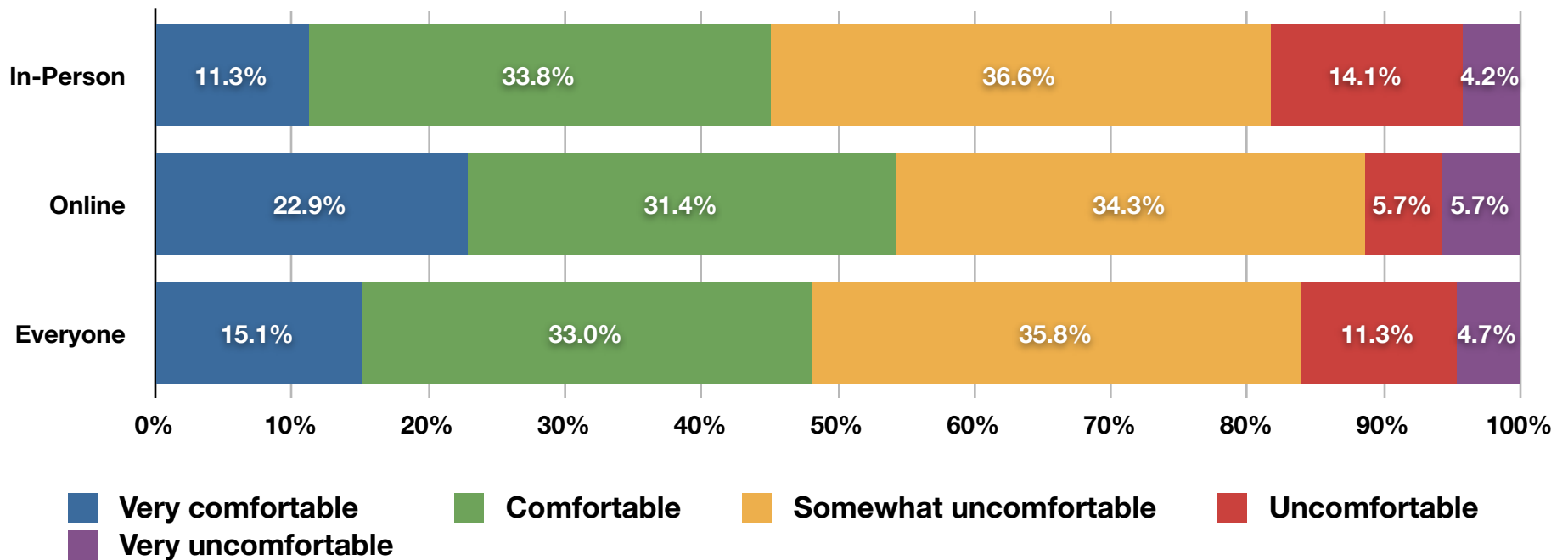
I learned some search strategies either through in-class instruction or through online tutorials and I used at least one of these search strategies when finding information.



Overall, 87.7% of respondents indicated that they learned search strategies through the instruction they received and used these search strategies when finding information. Respondents from the in-person group (88.7%) were more likely to learn and use these strategies than those in the online group (85.7%) but not by a significant margin.

## Question 73

On a scale of 1 to 5, how comfortable did you feel using library resources before receiving library instruction in Writing 10?

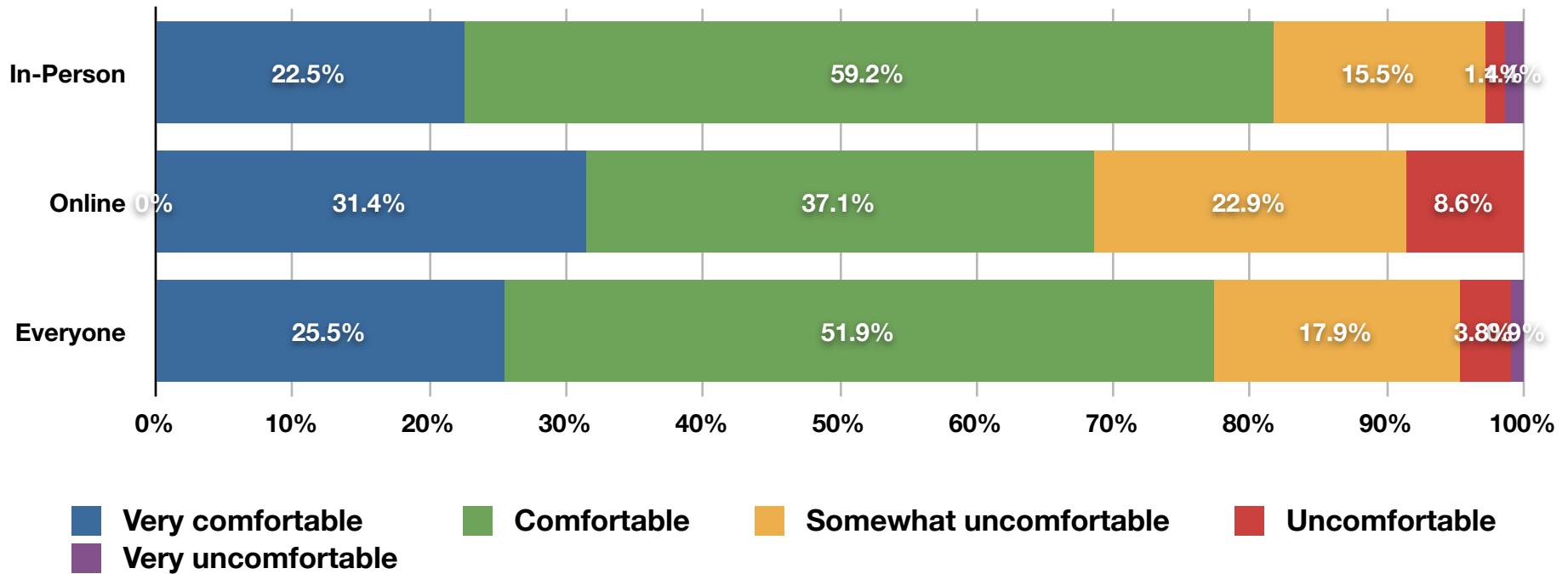


More respondents from the online group (22.9%) indicated that they were *very comfortable* using the library **before** receiving library instruction in Writing 10 than did those in the in-person group (11.3%).



## Question 74

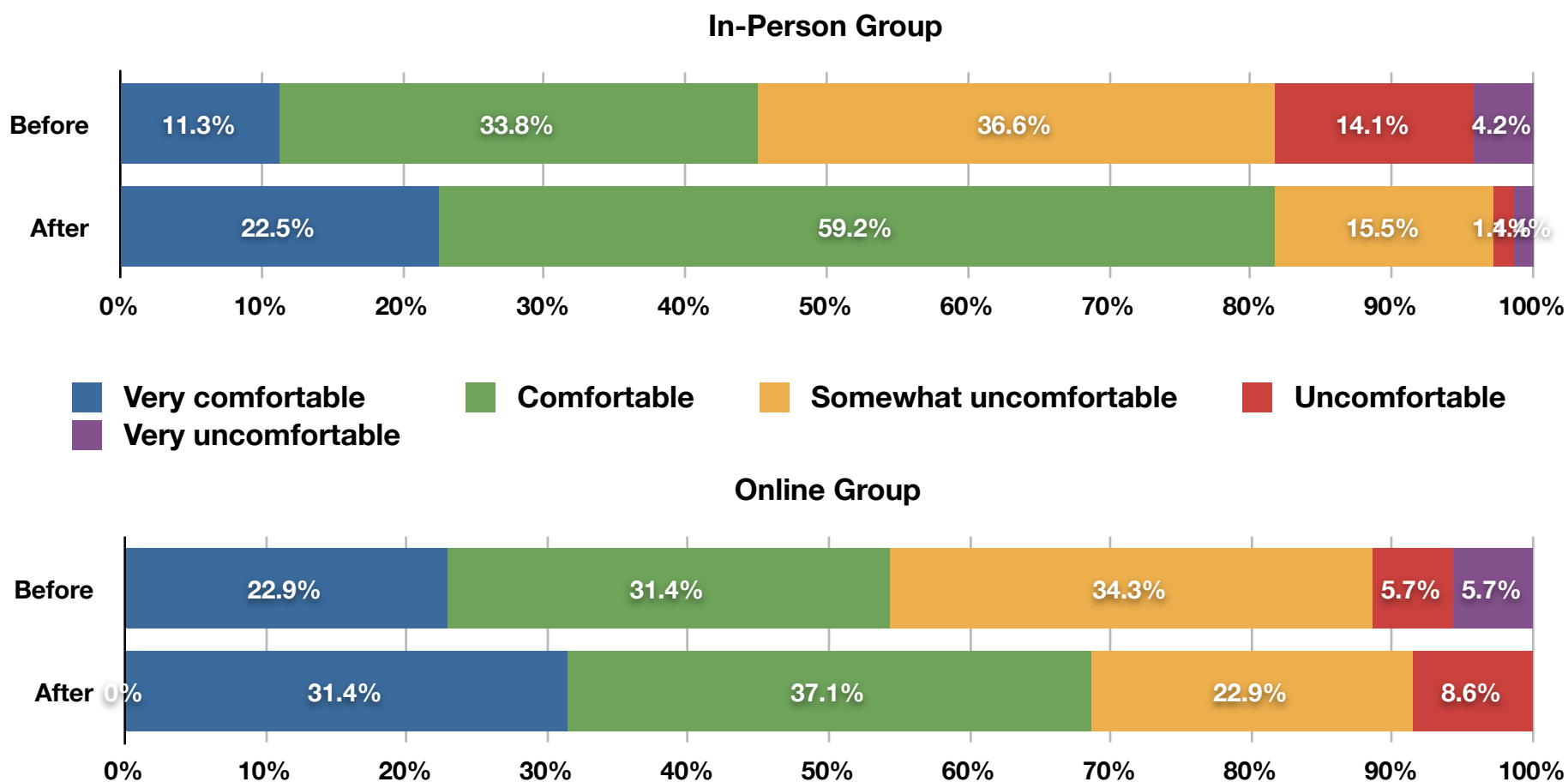
On a scale of 1 to 5, how comfortable do you feel using library resources after receiving library instruction in Writing 10?



Though the comfort level of both groups of respondents increased after receiving library instruction, it did so at a greater rate for those respondents in the in-person group.

## Combining Data from Questions 73 - 74

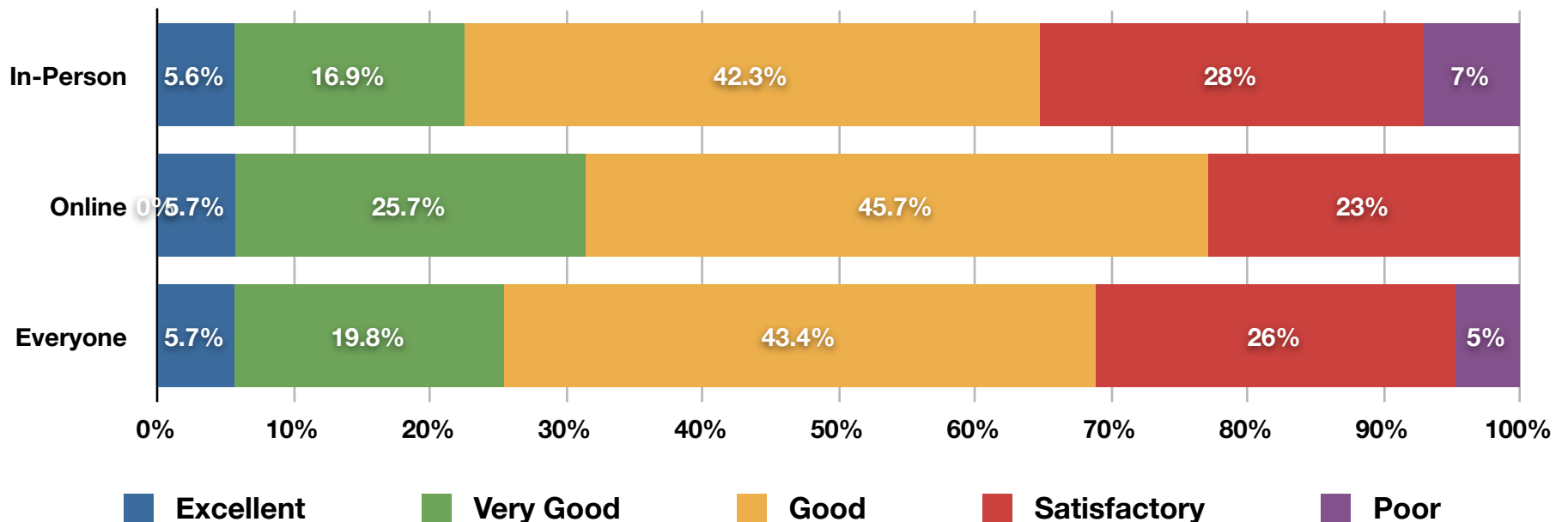
On a scale of 1 to 5, how *comfortable* did you feel using library resources *before and after* receiving library instruction in Writing 10?



The in-person respondent group shows greater gains in becoming *comfortable* with library resources after receiving library instruction than does the online respondent group.

## Question 75

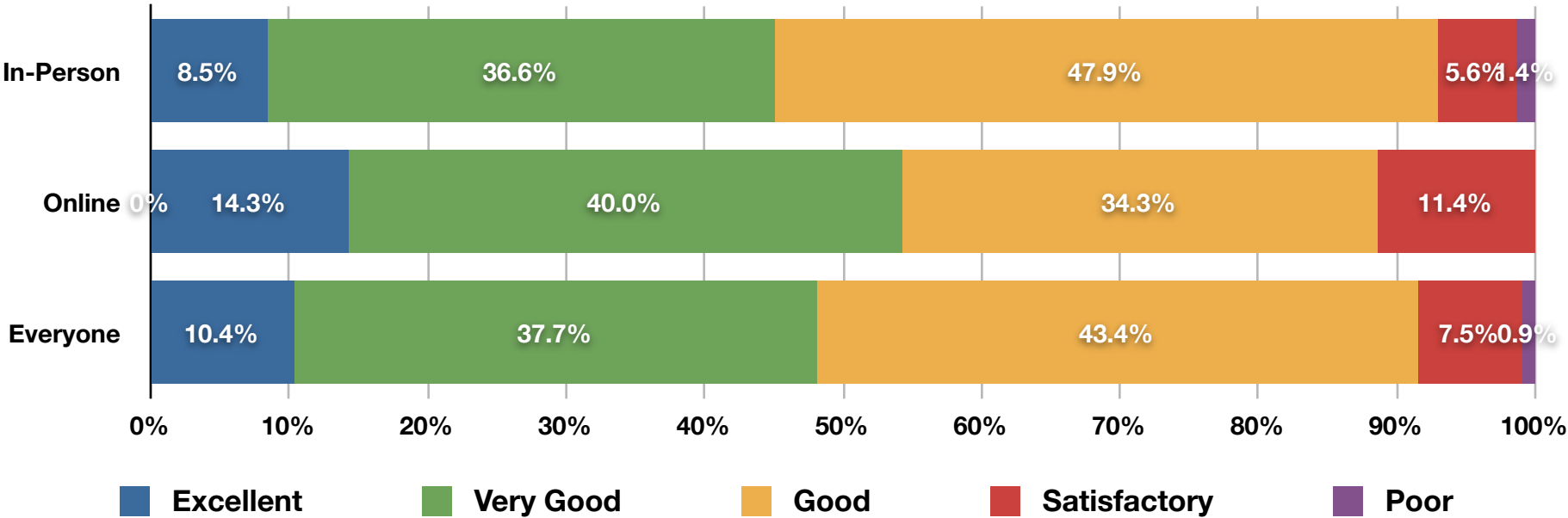
On a scale of 1 to 5, how would you rate your research skills before receiving library instruction in Writing 10?



Before receiving library instruction in Writing 10, respondents from both groups were likely to rate their skills as *excellent* at similar rates. However, in combining *excellent* / *very good* / and *good*, respondents from the online group (77.1%) rated their research skills higher than did the respondents from the in-person group (64.8%). No respondent in the online group rated his or her research skills as *poor* before receiving library instruction in Writing 10 while 7.0% of in-person respondents did so.

# Question 76

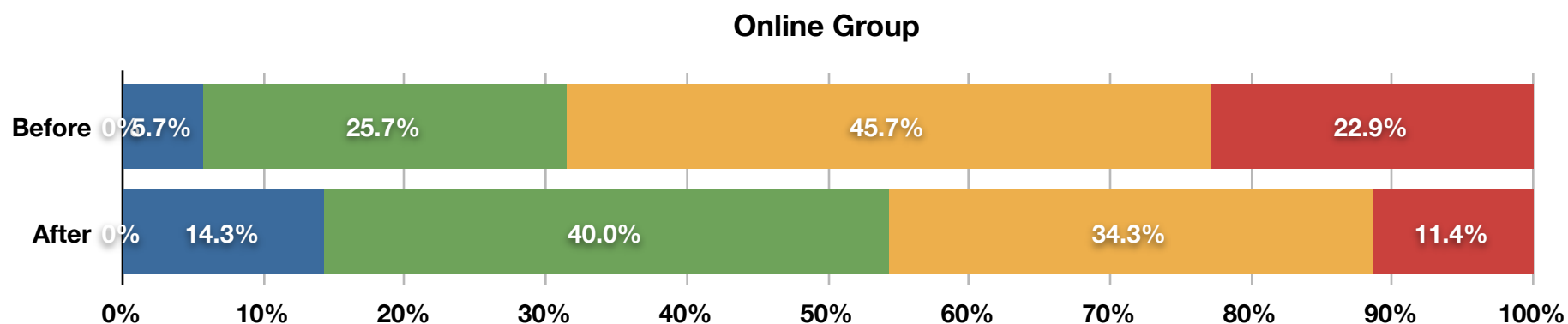
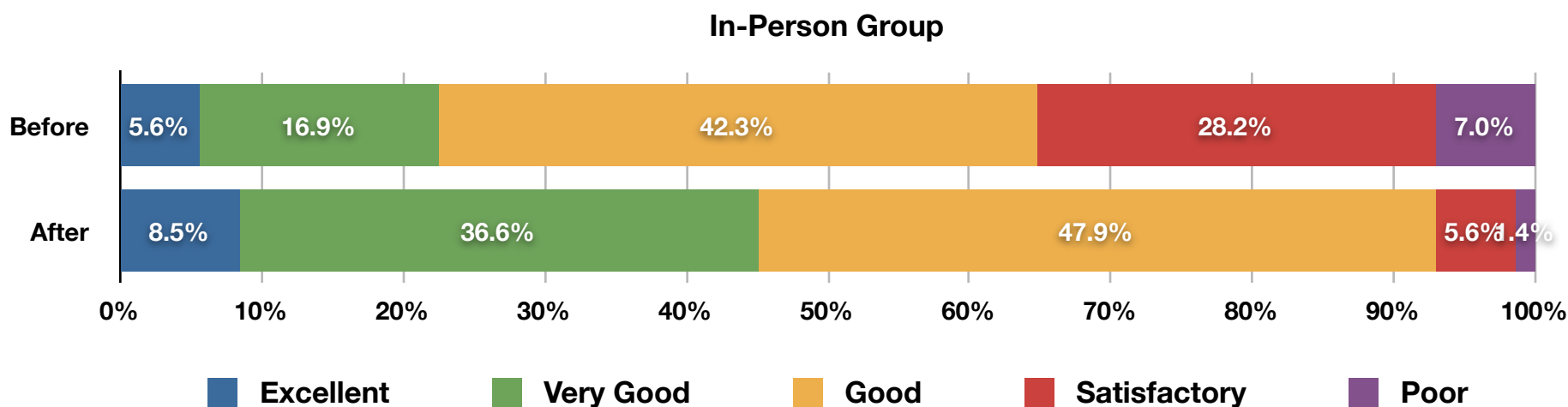
On a scale of 1 to 5, how would you rate your research skills after receiving library instruction in Writing 10?



Research skills rating by respondents in both groups increased following library instruction in Writing 10.

## Combining Data from Questions 75 - 76

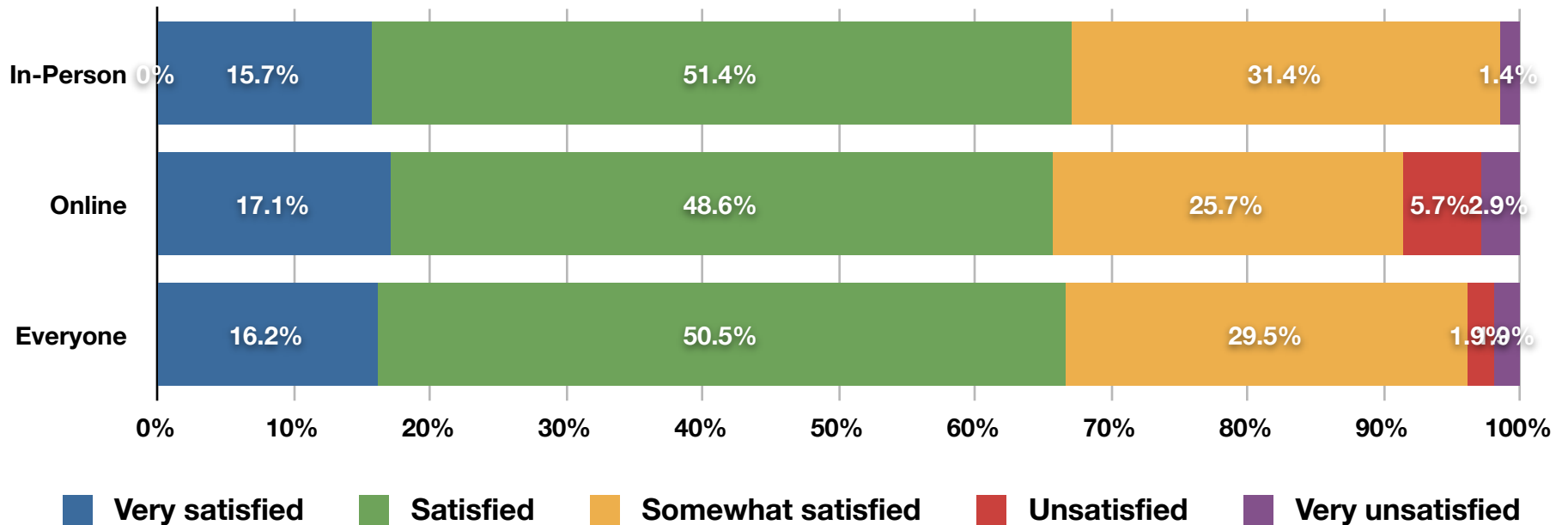
On a scale of 1 to 5, how would you *rate your research skills before and after* receiving library instruction in Writing 10?



Respondents from the online group also rated their research skills after receiving library instruction as higher than the respondents from the in-person group. However, the online group respondents also went into the online instruction more confident in their research skills. Note, no-one in the online group identified themselves as having poor research skills.

## Question 77

Were you satisfied with the amount of library instruction you received through an in-class session OR through online tutorials for your Writing 10 paper(s)?



Similar numbers of respondents from both groups were very satisfied or satisfied with the **amount** of library instruction. However, respondents from the online group did expressed higher levels of dissatisfaction. This question does not gather whether they thought the amount of instruction was too little or too much.