



# INFORMATION COMPETENCY ILO ASSESSMENT FALL 2020

## SUMMARY OF FINDINGS

**Los Angeles Mission College**  
Learning Outcomes Assessment Committee (LOAC)  
and Office of Institutional Effectiveness (OIE)

June 2021  
[www.lamission.edu/slo](http://www.lamission.edu/slo)

## I. Introduction

Los Angeles Mission College (LAMC) recognizes that it is important for students to be information competent when they leave the college, and information competency (IC) is one of LAMC's institutional learning outcomes (ILOs). The purpose of this report is to present the process, results, conclusions, and recommendations of the fall 2020 assessment of the information competency institutional learning outcome.

The ILO states: *Students will demonstrate information competency by combining aspects of library literacy, research methods and technological literacy. Information competency includes consideration of ethical and legal implications of information and requires the application of both critical thinking and communication skills. Evidence of competency will be the ability to find, evaluate, use, and communicate information in all its various formats.*

The assessment methods and process were originally developed during a pilot assessment implemented in spring 2014 by the ILO Information Competency Assessment Taskforce of LAMC's Learning Outcomes Assessment Committee (LOAC). A full, campus-wide assessment followed in spring 2015, in which 1,035 students were assessed.

A follow-up assessment was scheduled for spring 2020, however, due to Covid-19, the assessment was postponed to fall 2020. Despite having spent a significant amount of time in fall 2019 carefully determining the best sampling strategy for the upcoming assessment, due to Covid, an authentic assessment using the chosen sampling strategy was no longer feasible. A three-part replacement assessment was conducted in its place, including an online student "quiz," a parallel faculty survey, and an automated roll-up assessment.

Students were invited to participate in an online IC student quiz (see appendix 1) conducted via the Canvas learning management system during fall 2020. A total of 1,362 unduplicated students took the quiz. While the fall 2020 student quiz is similar in content to the student competency survey administered in previous years, the current assessment differs from previous assessments in that previously the survey was only an auxiliary tool, and not the primary assessment tool. As a result, the existing benchmark for this ILO (70 percent of students will achieve an acceptable or above score) was not directly applicable to the current Covid-pivoted assessment which lacks a rubric defining acceptable scores. After discussion, the LOAC committee determined that an appropriate modification of the benchmark for this part of the assessment only would be 70 percent of students answered at least nine out of 12 content questions correctly on the quiz.

In addition, while the previous assessments were administered only in courses with SLOs that mapped to the IC ILO, the current assessment was open to all students, including those who may not have completed any coursework related to information competency. Although this approach does address the recommendation from the last assessment to expand the number of online students surveyed, the change in the population being assessed simultaneously renders direct comparisons to previous results, including for those questions that were identical, impracticable.

This year's assessment additionally included a parallel faculty survey (see appendix 2) addressing the recommendation from the previous assessment to include faculty perspectives in the assessment. A total of 80 faculty members completed the faculty survey. The first question on both the student quiz and the faculty survey addressed utilization of library services, with the same services listed for both to compare

utilization of library services from both student and faculty perspectives. Faculty were then asked to rate their students' ability on key aspects of the ILO, while students were asked 12 content questions relating to the ILO.

In an attempt to triangulate assessment of student achievement, a roll-up assessment was also conducted. The roll-up assessment mathematically combined the assessment results of the 41 linked SLOs which were assessed during fall 2020. From this, the percentage of students scoring acceptable or above across all of the SLO rubrics used in the roll-up could be determined, and a single normalized score value was also determined. Rather than using an average score, which does not take into account rubrics with different point values and different numbers of categories, the normalized score standardizes all rubrics and compares them on a scale ranging from -1.0 to +1.0 where the acceptable score is zero and positive numbers indicate achievement above the acceptable level while negative numbers indicate achievement below the acceptable level.

Each of the three parts of the assessment will be discussed individually below.

## II. Student Quiz

There were some discrepancies between the demographic breakdown of the students who took the quiz and the overall college demographic breakdown during fall 2020 (figure 1). Proportionally fewer Hispanic students and fewer male students completed the quiz than were enrolled at the college. There were also proportionally fewer students under 18. Students enrolled in fewer than six units comprise half of the college's student body, however, they represent less than one-third of the students participating in the assessment.

**Figure 1: Comparison of Student Quiz Respondents to Overall Student Body**

	Fall 2020 Student Body	Student Quiz Respondents	
<b>OVERALL</b>	<b>9,790</b>	<b>1,362</b>	
<b>Gender</b>			
Female	64.0%	71.7%	976
Male	35.4%	25.0%	341
Other/Unknown	<1%	3.3%	45
<b>Ethnicity</b>			
Hispanic	75.0%	68.9%	939
White	10.9%	10.8%	147
Asian	5.9%	8.1%	110
Black	3.2%	3.8%	52
Multiethnic	1.5%	1.8%	25
Other/Unknown	3.5%	6.5%	89
<b>Age</b>			
Under 18	15.5%	4.8%	65
18-21	33.3%	29.3%	399
22-25	18.0%	17.5%	238
26-30	13.4%	15.3%	209

31-40	11.6%	17.1%	233
41-50	4.9%	7.9%	108
Over 50	3.4%	4.8%	66
Unknown	-	3.2%	44
<b>Unit Load</b>			
12 or more units	16.2%	19.5%	266
6-11.5 units	31.0%	29.1%	396
Less than 6 units	50.0%	28.5%	388
Zero units	2.8%	19.8%	269
Unknown	-	3.1%	43
<b>Units Completed</b>			
Zero units		4.3%	59
1-15.5 units		18.1%	247
16-30 units		14.8%	201
31-45.5 units		15.5%	211
46-60 units		14.0%	190
Over 60 units		28.6%	390
Unknown		4.7%	64
<b>Library Services</b>			
Used one or more		60.4%	823
None		38.3%	522
Unknown		1.2%	17

The student quiz consisted of 13 questions: an introductory question on the utilization of library services followed by 12 ILO content questions (appendix 1). The first question on both the student quiz and the faculty survey asked which of seven library services were used by each population. All relevant options could be selected. Over 60 percent of responding students have utilized at least one service (figure 2). The most popular services were Library Research Guides and Learning Center Tutoring. Asking a librarian for help, Canvas workshop modules, and Zoom library orientations were also used by a fair number of students, while prerecorded library orientations and librarians embedded in Canvas courses were not used by many students. This question was rewritten to be appropriate to the fall 2020 online learning environment and is not comparable to the question asked in previous assessments.

**Figure 2: Student Utilization of Library Services**

<b>Which support services have you used at LAMC? <u>Mark all that apply.</u></b>	<b>Total</b>	<b>%</b>
<b>A) Live Zoom Library Orientation</b>	221	16.2
<b>B) Pre-Recorded Library Orientation</b>	92	6.8
<b>C) Library/Librarian help</b>	266	19.5
<b>D) Library Research Guides</b>	442	32.5
<b>E) Embedded Librarian in Canvas course</b>	98	7.2
<b>F) Uploaded Library MLA or APA workshop modules in Canvas</b>	232	17.0
<b>G) Learning Center Tutoring</b>	377	27.7

None of the above	522	38.3
At least one service	823	60.4
All seven services	13	1.0

Figure 3 shows the utilization of library services broken out by service and demographic group (refer to figure 2 for the definitions of the alphabetic headers). While overall utilization of services (measured by a student using at least one service) seems to be spread evenly across most demographic groups<sup>1</sup>, with students over 50 having the highest utilization of at least one library services, there are differences in the utilization of individual services. Male students were much more likely to attend live Zoom library orientations than female students, while female students were more likely to use library research guides and tutoring than their male counterparts. Hispanic and Asian students had high utilization of library research guides and tutoring. Black students were most likely to use pre-recorded library orientations and Canvas-embedded librarians, services which were underutilized by other demographic groups.

**Figure 3: Percentage of Students Reporting Utilization of Library Services by Demographic Group**

	A	B	C	D	E	F	G	None	One or More
<b>OVERALL</b>	16.2%	6.8%	19.5%	32.5%	7.2%	17.0%	27.7%	38.3%	60.4%
<b>Gender</b>									
Female	14.1%	6.1%	19.9%	33.8%	7.5%	17.6%	28.5%	38.3%	61.7%
Male	21.1%	8.5%	19.1%	28.7%	6.5%	15.2%	24.6%	40.5%	59.5%
Other/Unknown	24.4%	6.7%	15.6%	31.1%	6.7%	17.8%	33.3%	22.2%	77.8%
<b>Ethnicity</b>									
Hispanic	15.1%	5.8%	19.6%	34.6%	6.8%	17.1%	28.0%	38.2%	61.8%
White	19.0%	8.8%	17.0%	23.8%	8.2%	17.7%	23.8%	38.8%	61.2%
Asian	16.4%	10.0%	26.4%	38.2%	5.5%	14.5%	30.9%	36.4%	63.6%
Black	25.0%	15.4%	23.1%	23.1%	15.4%	21.2%	25.0%	38.5%	61.5%
Multiethnic	4.0%	0.0%	12.0%	16.0%	0.0%	8.0%	16.0%	56.0%	44.0%
Other/Unknown	21.3%	6.7%	14.6%	27.0%	9.0%	18.0%	31.5%	36.0%	64.0%
<b>Age</b>									
Under 18	23.1%	7.7%	9.2%	21.5%	3.1%	13.8%	18.5%	43.1%	56.9%
18-21	16.8%	7.5%	21.6%	35.8%	6.0%	19.0%	31.8%	35.6%	64.4%
22-25	11.3%	6.7%	25.6%	40.3%	5.9%	18.9%	28.6%	34.0%	66.0%
26-30	14.4%	6.7%	21.1%	28.7%	8.6%	16.7%	25.4%	42.1%	57.9%
31-40	14.6%	3.4%	11.6%	27.5%	7.3%	10.7%	26.2%	46.4%	53.6%
41-50	18.5%	7.4%	13.0%	21.3%	10.2%	21.3%	21.3%	43.5%	56.5%
Over 50	25.8%	12.1%	31.8%	42.4%	13.6%	16.7%	27.3%	28.8%	71.2%

The remaining 12 questions on the student quiz indirectly assessed the student's knowledge of the ILO. In general, students answered eight of the content questions easily and had difficulty with the four others. Specifically, they could easily identify where to find scholarly research and what APA and MLA refer to.

<sup>1</sup> Fewer multiethnic students indicated utilizing library services, however, due to the small number of multiethnic students participating in the assessment (less than 30 total), it may not be a representative sample.

They also know the IC ILO, what an abstract is, what keywords to use in a search, how to recognize a subject expert, whether a publication is meant for an academic audience, and examples of plagiarism.

However, many students had difficulty with thesis statements, and more than 40 percent of students who took the quiz could not define a primary source, identify a citation for a journal article, or identify when an up-to-date source of information is needed. Utilization of library services was not correlated with better performance on the quiz.

Overall quiz results disaggregated by demographic group are given in figure 4. The percentage of students answering each individual question correctly is given in figure 5.

**Figure 4: Disaggregated Student Quiz Results**

	<b>Average # correct (out of 12)</b>	<b>Average % correct</b>	<b>% with 9+ correct</b>
<b>OVERALL</b>	<b>9.1</b>	<b>75.6%</b>	<b>65.6%</b>
<b>Gender</b>			
Female	9.1	75.4%	65.0%
Male	9.2	76.4%	67.4%
Other/Unknown	8.8	73.1%	64.4%
<b>Ethnicity</b>			
Hispanic	9.1	75.6%	66.3%
White	8.9	73.9%	61.2%
Asian	9.3	77.6%	70.0%
Black	8.6	71.8%	50.0%
Multiethnic	9.0	74.7%	56.0%
Other/Unknown	9.7	80.8%	70.8%
<b>Age</b>			
Under 18	9.9	82.2%	76.9%
18-21	9.2	76.9%	67.2%
22-25	9.3	77.2%	67.6%
26-30	9.1	75.7%	68.9%
31-40	8.8	73.2%	61.8%
41-50	8.6	71.9%	55.6%
Over 50	8.6	71.5%	57.6%
Unknown	8.7	72.7%	63.6%
<b>Unit Load</b>			
12 or more units	9.0	74.8%	64.7%
6-11.5 units	8.9	74.2%	61.9%
Less than 6 units	9.3	77.1%	69.1%
Zero units	9.2	76.7%	67.3%
Unknown	8.7	72.5%	62.8%
<b>Units Completed</b>			
Zero units	7.8	64.7%	45.8%
1-15.5 units	8.9	74.1%	63.2%

16-30 units	9.1	76.0%	64.7%
31-45.5 units	9.1	76.1%	66.4%
46-60 units	9.3	77.7%	67.4%
Over 60 units	9.2	76.8%	69.2%
Unknown	9.0	74.7%	65.6%
<b>Library Services</b>			
Used one or more	9.0	74.7%	63.3%
None	9.3	77.4%	70.3%
Unknown	7.5	62.3%	29.4%

There were a number of differences in performance across different demographic groups. Overall, male students performed slightly better than female students, although performance varies by question number (figure 5). Asian students were the only race/ethnicity subgroup to meet the benchmark. There is a clear equity gap for Black students and there may also be one for multiethnic students, however, too few multiethnic students completed the quiz for their data to be representative. Younger students generally did better than older students, although older students were more likely to utilize library services. As we would expect, students with more completed units did better than those just starting their college careers. This indicates that, for the most part, the longer students have attended LAMC, the better they are at information competency. This suggests that attending LAMC leads to increased attainment of the IC ILO skills.

**Figure 5: Percentage of Students Answering Correctly by Question**

	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13
<b>OVERALL</b>	81.9%	91.3%	58.5%	82.2%	51.8%	75.2%	68.6%	88.2%	54.2%	81.7%	85.2%	93.1%
<b>Gender</b>												
Female	82.9%	91.3%	58.0%	81.9%	51.2%	75.4%	67.1%	87.1%	52.2%	83.0%	84.8%	94.0%
Male	79.6%	91.4%	59.4%	82.9%	53.6%	74.7%	73.2%	90.9%	60.8%	77.2%	87.3%	90.8%
Other/Unknown	77.3%	90.7%	61.4%	81.8%	50.0%	75.0%	65.9%	91.1%	50.0%	86.4%	77.3%	90.9%
<b>Ethnicity</b>												
Hispanic	82.4%	93.0%	56.6%	81.8%	49.1%	74.8%	69.6%	88.8%	54.6%	80.9%	86.2%	93.6%
White	71.0%	82.3%	61.9%	83.6%	60.3%	72.1%	64.4%	87.0%	55.5%	82.6%	83.6%	89.7%
Asian	86.4%	89.1%	61.8%	84.3%	61.8%	79.1%	71.8%	82.7%	53.6%	82.7%	86.4%	93.6%
Black	82.7%	88.2%	61.5%	76.9%	40.4%	70.6%	53.8%	86.5%	46.2%	82.7%	78.8%	96.2%
Multiethnic	84.0%	88.0%	64.0%	80.0%	58.3%	76.0%	72.0%	84.0%	52.0%	84.0%	76.0%	80.0%
Other/Unknown	87.5%	94.3%	64.8%	85.2%	58.0%	81.8%	69.3%	93.3%	54.5%	86.4%	81.8%	95.5%
<b>Age</b>												
Under 18	90.6%	98.4%	86.2%	90.5%	43.8%	75.0%	83.1%	90.8%	64.6%	78.5%	95.4%	96.9%
18-21	85.4%	93.2%	67.2%	82.2%	49.4%	73.2%	73.2%	87.4%	57.0%	78.3%	86.9%	91.7%
22-25	84.3%	97.1%	51.3%	83.1%	51.7%	77.3%	73.8%	91.2%	56.5%	79.7%	87.8%	95.8%
26-30	80.9%	91.4%	55.5%	85.0%	52.4%	76.6%	70.4%	86.1%	54.1%	82.3%	86.6%	93.2%
31-40	76.2%	85.3%	51.9%	81.0%	54.3%	77.3%	61.2%	86.7%	47.6%	84.5%	81.1%	94.0%
41-50	75.2%	82.4%	48.6%	74.5%	55.6%	76.9%	55.6%	89.8%	51.9%	82.4%	80.6%	93.5%

Over 50	78.8%	87.9%	51.5%	78.8%	59.1%	66.2%	51.6%	87.5%	50.0%	96.9%	78.1%	85.9%
Unknown	79.1%	90.5%	60.5%	81.4%	48.8%	74.4%	65.1%	90.9%	48.8%	86.0%	76.7%	90.7%
<b>Unit Load</b>												
12 or more units	84.0%	90.2%	59.4%	80.3%	48.9%	68.8%	70.6%	88.0%	53.6%	79.2%	84.8%	94.3%
6-11.5 units	79.4%	92.4%	56.7%	82.5%	47.8%	74.2%	65.6%	88.6%	50.8%	79.7%	84.6%	92.4%
Less than 6 units	83.5%	92.8%	57.7%	84.4%	55.6%	79.4%	69.2%	87.1%	56.7%	84.4%	86.3%	93.5%
Zero units	81.6%	88.8%	61.0%	80.2%	55.6%	77.2%	70.9%	89.2%	57.1%	82.5%	86.2%	92.9%
Unknown	78.6%	90.2%	59.5%	83.3%	47.6%	73.8%	64.3%	90.7%	50.0%	85.7%	76.2%	90.5%
<b>Units Completed</b>												
Zero units	74.6%	79.7%	59.3%	63.8%	37.3%	66.1%	59.3%	76.3%	49.2%	71.2%	75.9%	75.9%
1-15.5 units	83.0%	90.7%	64.4%	76.1%	45.3%	71.4%	68.3%	86.2%	50.8%	83.4%	93.0%	93.0%
16-30 units	83.9%	91.0%	59.5%	79.6%	54.2%	75.6%	70.5%	88.1%	53.7%	76.0%	93.5%	93.5%
31-45.5 units	85.2%	91.9%	55.5%	84.5%	47.9%	74.9%	65.4%	90.9%	57.6%	83.2%	95.7%	95.7%
46-60 units	79.9%	94.2%	58.4%	86.7%	51.3%	79.5%	72.6%	91.6%	58.2%	81.0%	94.2%	94.2%
Over 60 units	80.6%	92.0%	55.4%	86.9%	58.5%	77.4%	69.1%	87.9%	54.0%	83.5%	93.5%	93.5%
Unknown	81.0%	90.3%	60.3%	81.0%	55.6%	71.4%	68.3%	90.6%	52.4%	88.9%	93.7%	93.7%

As mentioned above, the benchmark for this part of the assessment was 70 percent of students answered at least nine out of 12 content questions correctly on the quiz. Overall, 65.6 percent of students answered at least nine out of the 12 content questions correctly, thus the college did not meet the benchmark for the ILO in this part of the assessment. However, after discussion in the LOAC committee, the college feels that the benchmark is appropriate and that the failure to meet the benchmark reflects two factors outside the control of the college. First and foremost, the continuing Covid pandemic throughout fall 2020 has had deep, negative affects on our student population. That so many students were willing and able to participate in the student quiz is a testament to their strength and resiliency.

Secondly, as the quiz was administered through Canvas, sampling was not possible and all enrolled students were invited to participate. This necessarily included students who were not enrolled in, and had not previously enrolled in, any coursework related to information competency. Furthermore, the questions on the quiz focused primarily on formal research information competency. We recognize that not all of our students are transfer-bound and/or may be enrolled in a career education program and that while these students also need information competency skills, they may not need the ability to write formal research papers. In fact, 17 percent of faculty participating in the faculty survey reported that they did not give any assignments that require research (see section on faculty survey below). The college will endeavor to take this into account in future assessments.

A related, lingering methodological question which was discussed extensively during the previous IC ILO assessment and also during assessments of other ILOs is how the college can assess students who are close to graduation. This is the stage by which the student should have attained the necessary IC skills, and assessing students too early may not give them an opportunity to acquire those skills at the college. In the previous assessment, capstone courses in disciplines linked to the ILO were targeted for authentic assessments. However, we still found that due to the low degree of specialization in a two-year course of study, the lack of prerequisites in an open enrollment system, and the sequentially irregular enrollment patterns of students, particularly part-time students, not all students enrolled in capstone courses were close to graduation and students often enrolled in capstone courses in their majors several semesters



prior to completing their English and math requirements. The college continues to discuss this methodological hurdle.

For the current assessment, current enrollment in a course linked to the ILO did not improve a student's performance on the student quiz. Previous enrollment in a linked course gave students a small advantage, which increased if the student successfully completed that course (figure 6). It is worth noting here again, however, that not all of the courses linked to the IC ILO are focused on formal research information competency. Since the quiz was skewed towards research-related questions, it is understandable that overall the benchmark was not achieved.

**Figure 6: Student Quiz Results by Course Enrollment**

	Number of Students	% with 9+ correct
Enrolled in a linked course in Fall 2020	782	64.2%
Previously enrolled in a linked course	869	65.9%
Previously successfully completed a linked course	836	66.4%

### III. Faculty Survey

The faculty survey was completed by 81 faculty. The survey was conducted anonymously and did not ask for identifying information such as discipline. However, in some cases the discipline was mentioned in the 2 open response questions.

The first question on the faculty survey mirrored the student quiz question on utilization of library services. While 61 percent of students have used at least one service, 69 percent of faculty reported having used at least one service in their classes (figure 7). The most popular services used by both students and faculty were Library Research Guides and Learning Center Tutoring. Faculty reported utilizing pre-recorded library orientations and embedded librarians much more than students did.

**Figure 7: Faculty Utilization of Library Services**

Which support services have you used in your classes? <u>Mark all that apply.</u>	Total	%
A) Live Zoom Library Orientation	10	12.3
B) Pre-Recorded Library Orientation	17	21.0
C) Library/Librarian help	21	25.9
D) Library Research Guides	27	33.3
E) Embedded Librarian in Canvas course	17	21.0
F) Uploaded Library MLA or APA workshop modules in Canvas	15	18.5
G) Learning Center Tutoring	27	33.3
None of the above	16	19.8
At least one service	56	69.1
All seven services	1	1.2

The second question on the faculty survey asked if the faculty member gave any assignments requiring research. While the majority of faculty responding to the survey do give research assignments, a

substantial minority do not (figure 8). As a community college, we offer many career education programs, as well as courses which are not geared toward transfer-bound students. The focus of this and previous ILO assessments has been academic research-oriented, and one of the findings from this assessment is that the information competency needs of non-transfer students need to be better addressed and assessed by the college.

**Figure 8: Faculty Research Assignments**

Do you give any assignment that requires research?	Total	%
Yes	67	82.7
No	14	17.3

Faculty were also asked to evaluate their students' ability to perform the skills associated with information competency. The ILO states that "evidence of competency will be the ability to find, evaluate, use, and communicate information in all its various formats." About 65 percent of faculty respondents agreed that their students were able to find information, but only 47 percent indicated that their students could properly evaluate information sources (figure 9).

About 59 percent of faculty respondents agreed that their students could recognize when information is needed. These results are similar to those for question 10 of the student quiz. That question asked when a current source of information is required and was answered correctly by 54 percent of student respondents (figure 5).

In addition, 56 percent of faculty respondents indicated that their students knew how to properly cite sources using academic style guidelines. However, the survey did not ask if this skill was needed or used in any assignments, thus not all faculty members may have been able to evaluate their students' abilities for this skill. Nevertheless, the results from this question are similar to those for question 6 of the student quiz which asked students to identify a citation of an academic journal and was answered correctly by 52 percent of student respondents (figure 5).

**Figure 9: Faculty Evaluation of Students' Information Competency Skills**

When research is required, students are able to:	Total	%
Recognize when information is needed	48	59.3
Locate appropriate sources	53	65.4
Evaluate sources using guidelines	38	46.9
Cite sources using MLA, APA or other style guidelines	45	55.6

The final multiple choice question on the faculty survey asked how faculty discover plagiarism. The most popular method among those listed was noticing that the paper was not written in a voice consistent with the student's other work (figure 10). According to question 12 on the student quiz, students are aware of what plagiarism is, as over 90 percent of students with previous units at LAMC answered the question correctly (figure 5).

**Figure 10: Faculty Discovery of Plagiarism**

In what ways do you discover plagiarism?	Total	%
Noticed that the paper is not written in a voice consistent with the student's other work	58	71.6
Used a plagiarism tracker such as Turnitin	48	59.3
Noticed that more than one student turned in a similar paper	45	55.6

In addition to the four multiple-choice questions, there were two open response questions on the faculty survey asking faculty members how they incorporate information competency skills into their courses and assignments and what strengths and weaknesses they find with their students' application of information competency skills. Responses are listed in appendices 3 and 4.

#### IV. Roll-up Assessment

Mission College has a long history of conducting labor-intensive, college-wide authentic assessments of the college's ILOs, and planned to conduct one for the IC ILO in spring 2020, following extensive planning and coordination efforts during fall 2019. However, it was not possible to complete this assessment due to the declaration of the Covid-19 pandemic and the onset of mandatory stay home orders. Thus, the assessment was postponed to fall 2020 and converted to an online survey format. However, relying on a multiple-choice quiz to assess student achievement was seen as an insufficiently rigorous method of assessment as it assesses a student's theoretical knowledge about a skill rather than the student's actual ability to apply the skill. Also, as noted, the quiz was skewed towards research-related information competency questions.

In an effort to address these concerns and create a more well-rounded, contextualized assessment, we additionally reviewed the IC ILO roll-up assessment for fall 2020 generated by the SLO system. The roll-up assessment is based on the premise that linked SLOs support the ILO, therefore, if students are achieving all of the linked SLOs, they should also be making substantial progress toward achieving the ILO. However, SLOs are course-specific and the distribution of courses may over represent some aspects of the ILO while omitting other aspects as SLOs are not written with the ILO roll-up specifically in mind.

Another difficulty with roll-up assessments is the inability of our current SLO system to disaggregate by subgroup because individual student demographics are not tracked by the system. We need to rely on data from the student quiz to identify gaps and other areas where we can improve.

Nevertheless, some information can be gleaned from the roll-up assessment. The SLO system aggregated the results of the SLO assessments linked to the IC ILO that were conducted in fall 2020. From this, the percentage of students scoring acceptable or above across the SLO rubrics used in the roll-up was calculated, and a single normalized score value was also calculated.

Out of the 41 assessments included in the roll-up assessment, 33 of them used rubrics where acceptable or above was indicated and could thus be used to determine the percentage of students scoring acceptable or above on the roll-up assessment. Out of the 962 students included in those 33 assessments, 792 (82.3 percent) achieved acceptable or above. Since the benchmark for this ILO is 70 percent of students will achieve acceptable or above, the benchmark was met using this more contextualized roll-up method of assessment.

Next, an average normalized score, which standardizes all rubrics, was also calculated to determine the extent to which students achieved the ILO competencies. Normalized scores range from -1.0 to +1.0 with

zero being the acceptable score, +1.0 being a perfect exemplary score and -1.0 being a complete failure. Therefore, any positive number indicates achievement above the acceptable level and any negative number indicates achievement below the acceptable level, and the magnitude of the number indicates how far above or below acceptable the overall performance was. The average normalized score for this roll-up assessment was 0.48, indicating that on average the results of the rolled up SLO assessments exceeded the acceptable score by a substantial margin.

In addition, two instructors made comments related to information competency in their SLO assessments:

- ANTHRO 101 “There was a smattering of students who struggled with writing and plagiarism”.
- HEALTH 008 “areas of the criterion that students did not perform as well are communicating information, and retrieving relevant information from many sources”.

SLO assessments typically do not include ILO-specific criteria in their rubrics, and this was also the case for the Information Competency roll-up assessment. Therefore, to maximize the utility of roll-up assessments, it is important to ensure that SLOs mapped to ILOs are assessed using activities that require the skills stated in the ILO, or include criteria in rubrics that specifically relate to the ILO being assessed.

## **V. Conclusions and Recommendations**

The assessment results were discussed at the Learning Outcomes Assessment Committee (LOAC) meetings on February 24, March 24, April 28, and May 26, 2021, and discussed by the entire college at the annual SLO Summit on April 30, 2021.

The following observations and recommendations were made regarding the assessment process and outcomes.

- Data in this and other reports support the formation of a Black student success center, such as an Umoja program. LOAC members and SLO Summit participants were invited to the Umoja Mission Task Force meetings on May 6, May 20, and May 27, 2021.
- Roll-up assessments, whether or not they are disaggregated for DI groups, do not necessarily address the core of the ILO: the critical thinking component. Continuing authentic ILO assessments should be considered. In addition, when mapping SLOs to PLOs and ILOs in eLumen, department chairs and coordinators should ensure that mapped SLOs are assessed using activities that require the skills stated in the ILO (or PLO), or include criteria in rubrics that specifically relate to the ILO (or PLO) being assessed.
- Library services can be more thoroughly integrated into Canvas. LTI Canvas integration is being planned for Fall 2021 to allow embedding of Springshare Library material, including LibGuides, E-Reserves, LibCal, and more. Full integration of these library materials will allow faster student access and improve ease of use for students and instructors.
- Librarians have created self-paced MLA & APA citation modules that faculty can upload from Canvas Commons.
- Increased collaboration between librarians and faculty can increase student success. For example, librarians can make in-class presentations on research skills, fake news, and other topics in support of class assignments. Library workshops tend to have low attendance. When the same content is presented in class as an introduction to an assignment, we reach more students and students are more receptive.
- Librarians can attend department meetings as needed to learn more about department needs.

- Librarians can collaborate with faculty to build more course or assignment specific resources or research guides that incorporate information competency skills into their curriculum.
- Many departments on campus are already collaborating with the library. Culinary Arts is an excellent example of a Career Education discipline that has incorporated research and information competency skills into their curriculum by assigning a chef biography that students work with the library to complete.
- Collaboration between ESL faculty and departments with large numbers of English learners can also increase student success. For example, there are many English learners in the Culinary Arts program. In addition, collaboration with ESL faculty can support English learners who are already in transfer-level classes, regardless of whether the students are, or have, enrolled in ESL classes at LAMC.
- To encourage students to complete modules on information competency, digital badges can be created for workshops and skills. Extra credit can also be offered to students for attending library workshops or modules embedded in Canvas.
- Adult Basic Education is unarchiving a noncredit critical thinking class that will be updated and included in the new College Readiness certificate. Librarians can collaborate with noncredit to offer an information competency skills digital badge award.

In conclusion, despite the challenges of conducting an ILO assessment during Covid lockdown, this assessment of the Information Competency ILO provided the College with useful data on student achievement and feedback from faculty regarding the information competency of our students, and offered the campus an opportunity to engage in data-driven deep discussions about longstanding equity gaps centered on our students' achievement of our institutional learning outcomes.

We found that students are able to meet the benchmark set by the College for this ILO when information is contextualized within the framework of a specific course, despite the generalized climate of misinformation and disinformation currently present in the wider world. We also found that many departments and units on our campus are already engaging in cross-functional collaborations with the library and other departments to improve student learning, and have been able to share these best practices with the campus at large.

However, we also found clear equity gaps that mirror patterns found in reports on student achievement in other areas, and hope that the data found in this report will support some of the initiatives currently being considered on campus to support these groups. We have shared a number of recommendations in this report that we hope will improve student outcomes across the board as well as close our equity gaps, and bring our students one step closer to achieving their dreams.

## Appendix 1: Student Quiz

### Information Competency ILO Survey – Fall 2020

Please make sure your contact information is correct for the raffle!

**Please enter your student ID below (example: 881234567 or 901234567)** [Text box]

**Please enter your LACCD student email (example: [name0000@student.laccd.edu](mailto:name0000@student.laccd.edu))** [Text box]

**1. Which support services have you used at LAMC? Mark all that apply.**

- a. Live Zoom Library Orientation
- b. Pre-Recorded Library Orientation
- c. Library/Librarian help
- d. Library Research Guides
- e. Embedded Librarian in Canvas course
- f. Uploaded Library MLA or APA workshop modules in Canvas
- g. Learning Center Tutoring
- h. None of the above

Please select the **best answer** for each question below.

**2. Information Competency is one of Los Angeles Mission College's Institutional Learning Outcomes. Information Competency is best described as:**

- a. The ability to read complex documents.
- b. The ability to recognize when information is needed and to locate, evaluate and use information effectively and responsibly.
- c. The ability to search the free Web for information.
- d. The ability to summarize information you need.

**3. Which is the best place to find research published by scholars, experts or professionals?**

- a. Wikipedia.com
- b. Newspapers
- c. Scholarly books and journals
- d. General interest magazines

**4. A primary source is:**

- a. An original document such as a diary, letter, etc.
- b. A collection of critical essays
- c. An encyclopedia entry
- d. An article or book that extensively analyzes a topic

**5. An abstract is:**

- a. A quotation from a book
- b. A type of government document
- c. A full text article
- d. A summary of a resource

**6. You see the following citation: Bonilla-Silva, E. (1997) Rethinking racism: Toward a structural interpretation. *American Sociological Review*, 62, 45-80. This citation is for:**

- a. A journal article
- b. A book
- c. A website
- d. A newspaper article

**7. Which of the following choices provides the best list of keywords to use for the following assignment? Prepare a presentation on the progress achieved by women during the 1980s.**

- a. Presentation, women, progress
- b. Progress, achieved, 1980s
- c. Women, progress, achieved
- d. Women, progress, 1980s

**8. Which of the following is an example of an effective thesis statement?**

- a. Daylight Saving Time is the practice of setting clocks forward by one hour in spring and back again in fall.
- b. I like when Daylight Saving Time ends in the fall.
- c. Switching between standard time and daylight-saving time leads to sleep deprivation and other health risks, so this practice should be abolished.
- d. California voters approved a proposition to end Daylight Saving Time.

**9. How do you know if someone is an authority on climate change?**

- a. She has her own website
- b. She reads numerous articles on global warming
- c. She uses technical jargon that most readers wouldn't understand
- d. She has a professional background that is directly related to the science of global warming

**10. Which requires a current source of information?**

- a. An analysis of the 2000 Presidential election recount
- b. A biography on Cesar Chavez
- c. Marketing statistics on flat screen TV's
- d. A critique of Shakespeare's sonnets

**11. Who would represent the target audience for the *Journal of Nutrition Education and Behavior*?**

- a. Professors, researchers, and students in human nutrition
- b. Members of Weight Watchers
- c. Athletes and coaches
- d. Chefs looking for nutritious recipes

**12. Which of the following is NOT an example of plagiarism?**

- a. Submitting another student's essay as your own
- b. Copying material from several writers, and citing only one of them
- c. Not citing or crediting some sources used in your paper
- d. Paraphrasing content from a source that you cited in the paper

**13. APA and MLA style both refer to?**

- a. Library classification systems
- b. Call numbers
- c. Formats for documenting the sources used for a paper
- d. Article indexes

## Appendix 2: Faculty Survey

### FACULTY Information Competency ILO Survey – Fall 2020

#### LAMC Institutional Learning Outcome (ILO): Information Competency

Students will demonstrate information competency by combining aspects of library literacy, research methods and technological literacy. Information competency includes consideration of ethical and legal implications of information and requires the application of both critical thinking and communication skills. Evidence of competency will be the ability to find, evaluate, use, and communicate information in all its various formats.

1. **Which support services have you used in your classes? Mark all that apply.**
  - a. Live Zoom Library Orientation
  - b. Pre-Recorded Library Orientation
  - c. Library/Librarian help
  - d. Library Research Guides
  - e. Embedded Librarian in Canvas course
  - f. Uploaded Library MLA or APA workshop modules in Canvas
  - g. Learning Center Tutoring
  - h. None of the above
  
2. **Do you give any assignment that requires research?**
  - a. Yes
  - b. No
  
3. **When research is required, are students able to do the following? Mark all that apply.**
  - a. Recognize when information is needed
  - b. Locate appropriate sources
  - c. Evaluate sources using guidelines
  - d. Cite sources using MLA, APA or other style guidelines
  
4. **In what ways do you discover plagiarism? Mark all that apply.**
  - a. Noticed that the paper is not written in a voice consistent with the student's other work
  - b. Used a plagiarism tracker such as Turnitin
  - c. Noticed that more than one student turned in a similar paper
  
5. **How do you incorporate information competency skills in your courses/assignments?** [text box]
  
6. **What strengths or weaknesses do you find with student's application of information competency skills?** [text box]



### Appendix 3: Responses to Faculty Survey Question 5

5. How do you incorporate information competency skills in your courses/assignments?
1. assign research in specific databases 2. present lessons and assign worksheets on avoiding plagiarism 3. present lessons and assign worksheets on MLA format and citation
All quizzes and assessments lead to a full concert report, where students can synthesize the elements of music into a live, personal experience, while using research and citations of academic value.
As I learn new programs I choose the programs which can work as a tool to increase the quality of information for them without overwhelming them.
Assign research assignment that requires they obtain scholarly journal articles and summarize the content without repeating the information from the journal.
Assignments that require recognition of credible source markers, lectures and identifying sources, requiring them to cite etc. We have an SLO for information competency.
By explaining all necessary materials to the students.
By incorporating the assignments which require them to be content enough to complete them.
By using specific research paper assignments as part of the examinations.
By using timed quizzes that test ability of students to understand information covered in the course.
By zoom poll questions
Case analysis
Certain questions are required to be answered.
Check all assignments and resources.
Create specific goals aligned with specific information. Students demonstrate understanding of concepts being taught. Research and feedback is based on application of information and concepts to current work and projects.
Easy. A series of quizzes, exams, and written reports are required. It provides not only a measure of information competency, but also serves as a valuable assessment tool.
Five-page essays; Exams; Written College-level assignments
Grading with a rubric that outlines the information competency based on the materials and concepts of each class.
Have students read and research cases.
I explain everything on the first day of class
I give textbook reading assignments and create specialized PowerPoint presentations for the students to use.
I include exercises, quizzes, videos, handouts and librarian workshops. Students are required to include research in three of their essays.
I normally assign different topics to each student when possible.
I teach it
I usually have a video presentation at the beginning of the semester for research classes.
If I understand this correctly, I do a number of things: (1) I provide a sample paper which I have written demonstrating the required competency skills; (2) provide a link to the LAMC library sources; (3) provide a link to an APA website detailing what is and what is not an academic source.
I'm teaching noncredit basic English, just getting the students accustomed to a library is the goal. They gave great in person tours.
In previous classes I created an assignment that required students to learn how to use criteria developed by Ithaca College to evaluate websites then apply those criteria to evaluate two different website on the same topic and identify the validity of the sites.
In the online class, I have 2 discussions focused on learning to find and evaluate sources.
lecture, recommended readings, library workshop customized for my class, tutoring, one on one librarian support, Oral and written understand through discussions, small group assignments, research and written assignments.
Oral presentation about an Italian city or culture.
Practical exams, quizzes, and discussions
Presentations

Quizzes, presentations and projects
Quizzes, skill-specific discussion assignments, timed essays, formal essays.
Reading assignments, exams, writing assignments, and discussions.
Referring students to library for supplemental reading materials.
Required "Evaluation of a Nutrition Claim" paper - they have to critically evaluate the author/source's credibility in the claim, they have to use library databases to find 2 peer-reviewed journal articles that support or refute the claim, they have to cite their references using APA or MLA guidelines.
Requiring students to cite sources
Research papers; weekly quizzes on MLA style and documentation.
Students are asked to complete a research project that involves collecting / finding and analyzing data.
Students do most of their career exploration on the Eureka.org platform. They need to incorporate the results into their projects, but they tend to just copy and paste the results into their papers.
Students must write a position paper on a controversial topic in the biological sciences. Majors must learn to read and evaluate a primary research article.
Students select an artwork from a museum to write about. Although the paper is mostly about their observations utilizing some of what they have learned in class about observing art, they may use sources to give some historical background about the work.
Students write a short reflection paper that requires them to gather information and apply critical thinking in their analysis and summary. They are also required to use MLA or APA guidelines to cite their sources.
Such skills are required to score well on the research paper; instruction on those skills is not provided in the course.
The students write research questions, complete research journals, and write an annotated bibliography in which they are tasked with assessing sources using a criteria from class.
There are lessons on evaluating sources and Discussions that require them to do that.
These ILO skills are an integral component of the coursework in my class. The research process is introduced step-by-step in the syllabus and the skills are scaffolded over a period of 8-10 weeks.
Through assigning research projects, tests/quizzes, group projects/oral presentations to the class.
Through the assigning of research papers and extra credit research work.
To introduce the research paper in my course, one lesson deals with information competency and critical thinking. Usually, this lesson follows the library orientation, so students are starting to become familiar with reliable sources they can access. We talk about rumor/gossip and play the "telephone game" as an example of how unchecked information can spiral out of control. The lesson focuses on ways to analyze sources and what qualities make a credible source.
When constructing speeches in my course, students are asked to utilize research strategies to locate Visual Aids linked to their speech topic.
With a final term team project requiring a paper and PowerPoint presentation.
Writing physics lab reports requires the ability to communicate rather complex ideas in understandable language. In the report conclusion, the student is required to explain certain principles and relate how their results specifically show the confirmation of those principles. In addition, the students must seek out the information they need from the lab instruction sheet and textbook.
Written assignments and multiple choice quizzes.
Written assignments and reflection as well as discussions.

## Appendix 4: Responses to Faculty Survey Question 6

6. What strengths or weaknesses do you find with student's application of information competency skills?
"Strengths" - ability to think creatively; choose & remain focused on a specific research topic; coordinate different materials and consolidate them into a coherent essay. Weaknesses - lack of access to technology in order to efficiently and completely research a specific topic (some students cannot afford to pay for internet servers, browsers, etc.)
1-by posting zoom meeting they can have access to lectures and labs materials. 2- tiredness and fatigue are big weakness
A weakness is the students willingness to accept anything they find online without determining the validity and/or purpose of the website.
Ability to understand research from plagiarism, support with rephrasing in their own thoughts.
Able to follow specific and detailed instructions that demonstrates content specific knowledge and understanding. Example 1. must find written transcript and video of recent US House hearing. Example 2. must identify 3 basic powers and 3 basic levels of federalism/Am. government in a 9 cell table.
Being distracted by so many other issues such as mastering different applications, food, and job insecurities.
Better when they work in small groups. Language learners have a more difficult time but we go over it and practice in class to be sure they can be successful for on own assignments. They get confused between MLA and APA. At this stage, I am looking for can they find reliable research, use citations and include references.
Citations. Students are supposed to be taught these in high school, senior year, but apparently are not. If you could reach out to the high schools and tell them that citations are not being taught, that would help. The students come into my class this way.
Competency varies and educators have to constantly remind them that we are available to help or direct them toward someone who can.
Depends on the student. Some excel and demand increased academic inquiries and knowledge, while others drift or seemingly are there for a variety of reasons. When the overall percentage of students going onto four-year college is about one-third, or 34%, then the issue is not information competency skills but how do you motivate and incentivize students to want to even develop information competency skills; and then seek to maximize them.
Difficulty finding and evaluating appropriate sources
Difficulty with following MLA format. Difficulty recognizing the need to document outside information that they believe is common.
Even after lessons, the ability to use criteria to evaluate sources is weak. The ability to spot bias is particularly weak, although maybe that's to be expected with students at this level.
For some it is difficult for them to form a complete sentence. Reading work out loud to catch errors. Strengths- Researching and APA formatting.
For the last couple of years, it seems that students are indifferent, passive, and simply lazy. They want high grades, yet are unwilling to actually complete the required assignments. Students use Google search because it is quick, easy, although inaccurate. Students use Google docs to format essays - even if their format is accurate. They have no interest in elevating their knowledge, and just want to use whatever is quick and easy.
In the last couple of years, I see students are very lazy and they do not want to earn their grades...they want to obtain high grades with as little effort as possible. They want information fast and easy...even if it is inaccurate. They will use Google because it is easy although very often inaccurate. Students complain and immediately cry to the administration that "their being treated unfairly," and do not accept accountability.
It is very difficult to get students to apply appropriate criteria to their research and documentation processes overall, even after training, because they are tempted to save time and effort by using unqualified Internet sources that are easy to find and read. Deficiency in reading comprehension is a factor in many cases.
Lack of formal citation formatting.
Lack of proper skills to differentiate between commercial and peer-reviewed articles.
Language level. Poor written skills for college level. Lack of extensive critical thinking. On the positive, students find thorough resources and share information fairly fast.

Late course work
Many have not had (or learned much from) English Comp 1, and therefore, have very poor writing and researching skills. Students particularly can benefit from learning how to find academic materials, and how to cite those appropriately.
Many students require both, visuals and reading. Also, email reminders.
Many students who are in the English 101/72 classes are not prepared at all to use research techniques or MLA signal formats. These students struggle when incorporating quotations and organizing their thoughts, and many do not pass the research paper assignment. However, students have higher CPAs and have been prepared well for reading and writing assignments successfully complete their research assignment and pass the class.
My level 3 ESL students find it challenging to summarize research material in their own words and report to the class with flash card notes instead of reading.
Poor incorporation of sources into the work, often without good analysis.
Reading comprehension
Some still don't understand difference between consumer/popular articles and peer-reviewed journal articles.
Some students are hampered by lack of access to internet resources and/or technology resources and thus cannot sufficiently research topics. The playing field needs to be level for all students - this lack of equal access during a pandemic is an issue the district needs to resolve.
Some students experience some challenges when listing sources in MLA or APA format.
Sometimes students forget or do not follow instructions
Sometimes they might copy and paste from sources without citations, but I encourage them to use turn it in to check their own work.
Strengths: some students read every word of instructions carefully and even catch errors in those instructions occasionally. Weaknesses: Some students miss important notes on my Canvas site or don't read lab instructions carefully.
Strengths: Students are able to use sources (library) if guided and taught how to do research effectively.
Strengths? A willingness to follow direction and seek accurate and honest sources. Weakness? Students doing the minimum with attitude that it's not important.
Students are able to gain an awareness of quiz preparation - including studying of material. However: lack of a level playing field in terms of internet access has hampered students who lack either the device/browser/accessibility of wi-fi or have financial issues in terms of acquiring technology needed.
Students are always appreciative of the additional support offered through the Library as well as the Child Development Student Resource Center. Students often have challenges in basic reading and written literacy skills, and need much support to develop a research paper or presentation. The many resources available currently for information competency seems to be providing important support, and students are becoming more comfortable with online resources and research.
Students consistently struggle with summarizing and paraphrasing source material and integrating it into their writing.
Students do well with explicit instructions and valid links.
Students don't know how to do the scholarly research.
Students oftentimes are able to find the information they need for their reflection papers, but have difficulty applying the information accurately in a way that reflects the position they are taking. Citing of relevant sources using MLA or APA guidelines is difficult for them.
Students seem better at distinguishing the difference between scholarly and popular sources; their MLA style has not improved and continues to be weak even in Eng 102 and Eng 208.
Students sometimes do not read the instructions carefully and miss certain key points that are needed to fully grasp the principles of the lab activity.
Students who don't spend enough time on the assignment tend to have weaknesses in sourcing and incorporating information from sources.

The most often problem I find is that I do not see the minimum number of sources for my papers. I require at least 3 for a 5 page paper, and I often find that they provide less than that minimum number. I do find, however, that EBSCO is often used as well as JSTOR as a database for research and I think that is wonderful.

They are not at all familiar with evaluating sources, and even with guidance struggle with it.

They do apply their results to the careers they are considering and are required to write about one for their final project.

They often have difficulty identifying sources of the correct type and reliability.

They struggle with evaluating the quality of online sources.

They struggle with how to use the databases at LAVC. They also tend to struggle with MLA, even after we talk about it, and despite the resources on the Canvas site for the class.

This ILO is much easier to assess. Not only do I evaluate students information competency with quantitative measures, such as quizzes and exams, but through qualitative means, in the way of pairs and projects.

Tiredness and not pay attention to the subject, perhaps covid-19 side effect. Some kind of depression. Not very interested as before.

Weakness: Students inability to formulate the correct questions that are needed to find the necessary information.

Weaknesses involve the ability to summarize content without repeating the article itself.

willingness to apply what's been taught.

With increased work demands (more assignments to take place of in class/lab interaction) and decreased supervisorial input in the online environment, some students are much more prone to seek online assistance through Chegg, Quizlet, etc. Most students, however, still appear to give good attention to their work, performing it with integrity and authenticity.