LOS ANGELES MISSION COLLEGE

Report on Disaggregated Institutional Learning Outcomes Data

This report summarizes the disaggregated results of the Fall 2014 LACCD Student Survey questions pertaining to LAMC's institutional learning outcomes (ILOs). The ILOs covered by the survey are:

- ILO #1: Written and Oral Communication
- ILO #2: Information Competency
- ILO #3: Problem Solving
- ILO #4: Math Competency (Quantitative Reasoning)
- ILO #7: Global Awareness

Written and Oral Communication

Definition: Students will demonstrate the interactive nature of communication involving speaking, writing, listening and reading. Evidence will be the student's ability to make a clear, well-organized verbal presentation employing appropriate evidence to support the arguments or conclusions and to write a clear, well-organized paper using documentation and quantitative tools when appropriate.

Related survey question: How much have your experiences at this college, both in and out of class, improved your ability to write and speak clearly and effectively?

Information Competency

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

Related survey question: How much have your experiences at this college, both in and out of class, improved your ability to use computers and other information technology?

Problem Solving

Definition: Students will demonstrate the ability to solve problems by examining, selecting, using and evaluating various approaches to developing solutions. Evidence will be the ability to observe and draw reasonable inferences from observations, distinguish between relevant and irrelevant data, define problems, analyze the structure of discipline or profession-based problem solving frameworks and to use such frameworks and strategies to develop solutions.

Related survey question: How much have your experiences at this college, both in and out of class, improved your ability to think critically and analytically?

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Math Competency (Quantitative Reasoning)

Definition: Students will demonstrate quantitative reasoning by identifying relevant data (numerical information in mathematical or other contexts), selecting or developing models appropriate to the problem which represents the data (organized representations of numerical information, e.g., equations, tables, graphs), obtaining and describing results and drawing inferences from data. Evidence will be the ability to extract appropriate data from a problem, to arrange data into tables and graphs or to select or set up an equation or formula, to obtain correct results, to describe trends and features in those results and to make predictions or estimates while drawing qualitative conclusions about the original situation.

Related survey question: How much have your experiences at this college, both in and out of class, improved your ability to solve numerical problems?

Global Awareness

Definition: Students will demonstrate global perspectives by generating theoretical and pragmatic approaches to global problems within a disciplinary or professional context. They will develop responsibility toward the global environment in others. Evidence will be the ability to analyze global issues from multiple perspectives, to articulate understanding of interconnected local and global issues, and apply frameworks in formulating a response to global concerns and local issues.

Related survey questions:

- How much have your experiences at this college, both in and out of class, improved your ability to understand people of other racial, cultural or ethnic backgrounds?
- At this college, how often do you have serious conversations with students who differ from you in terms of their religious beliefs, political opinions, or ethnic background?

SUMMARY OF RESULTS

A total of 2,862 valid responses were received from students enrolled at LAMC in Fall 2014. In general, the demographic breakdown of the survey respondents matched those of the College as a whole (fig. 1). Students under 18 years of age were over-represented in the survey sample and student over 26 were somewhat underrepresented. The median age of survey participants was 21.

In the following sections, a **mean** score is given, which represents the average score across all respondents in the demographic group. The mean is calculated based on a scale of 1 to 4, with 4 representing the "best" score, indicating that students felt that their experiences at LAMC had greatly improved their ability to perform the tasks associated with the specified ILO.[1] For purposes of this report, a score below 3.00 represents a need for improvement.

[1] Actual survey response options were: 1=Very Little, 2=Some, 3=Quite a Bit, 4=Very Much.

Figure 1: Demographic Breakdown of Survey Respondents

	Survey Respondents		Student Body, Fall 2014	
Gender	**N**	**%**	**N**	**%**
Female	1,634	57.1%	6,717	60.2%
Male	1,228	42.9%	4,433	39.8%
Total	**2,862**	**100.0%**	**11,150**	**100.0%**
Ethnicity	**N**	**%**	**N**	**%**
Hispanic	2,178	76.1%	8,586	77.0%
White	256	8.9%	1,225	11.0%
Asian/Pacific Islander	200	7.0%	556	5.0%
Black	92	3.2%	362	3.2%
Other	45	1.6%	185	1.6%
Unknown	91	3.2%	238	2.1%
Total	**2,862**	**100.0%**	**11,150**	**100.0%**
Age	**N**	**%**	**N**	**%**
Under 18	493	17.2%	766	6.9%
18-21	1,105	38.6%	4,157	37.3%
22-25	656	22.9%	2,431	21.8%
26-30	219	7.7%	1,203	10.8%
31-40	228	8.0%	1,261	11.3%
41-50	91	3.2%	753	6.8%
Over 50	70	2.4%	579	5.2%
Total	**2,862**	**100.0%**	**11,150**	**100.0%**

Differences by Gender

In general, women tended to indicate a greater degree of improvement than men. Their mean scores were higher than those of men across all ILOs except math competency (fig. 2). This can be interpreted in a number of different ways; women may simply be rating their learning higher due to more lenient evaluations, lower expectations and/or a lower initial skill level, while showing the same level of improvement and/or achievement as men. In addition, the one area where women rated themselves lower than men is math competency, an area traditionally associated with better performance by men. Stereotype threat may be at play here and more data is needed to determine whether there is actually a performance gap between women and men for all four ILOs.

The overall mean for math competency was a relatively low 2.97, indicating that there is room for improvement for both women and men in their ability to solve numerical problems. Men rated their math competency as having improved slightly more (mean of 2.98) than women did (mean of 2.95). Among the four ILOs assessed in this survey, math competency is the one which students felt the least improvement in. One reason that students may be reporting low levels of improvement in math competency is that due to previous negative experiences with math, students often delay taking required math classes until the end of their programs. Thus students who are just beginning at LAMC

may not yet have taken any math courses, and are therefore unlikely to report a significant amount of improvement in their ability to solve numerical problems due to their experiences at LAMC.

Figure 2: Results by Gender

	Written & Oral Communication		Information Competency		Problem Solving		Math Competency		Global Awareness	
Gender	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**
Female	1,587	3.14	1,590	3.08	1,577	3.22	1,576	2.95	1,574	3.18
Male	1,196	3.06	1,199	3.01	1,188	3.17	1,188	2.98	1,182	3.08
Total	**2,783**	**3.11**	**2,789**	**3.05**	**2,764**	**3.20**	**2,764**	**2.97**	**2,756**	**3.14**

Differences by Ethnicity

Among all of the ethnicity groups, Hispanic students indicated the highest amount of improvement with regard to all five ILOs (excluding students of unknown ethnicity), followed by Asians/Pacific Islanders (fig. 3). The difference is most pronounced for information competency and problem solving. Means for Hispanics and Asian/Pacific Islanders was almost 0.20 higher than for the other groups for both ILOs.

Figure 3: Results by Ethnicity

	Written & Oral Communication		Information Competency		Problem Solving		Math Competency		Global Awareness	
Ethnicity	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**
Hispanic	2,125	3.15	2,135	3.08	2,122	3.23	2,120	3.00	2,116	3.16
White	252	2.89	250	2.88	247	3.06	245	2.84	243	2.98
Asian/Pacific Islander	189	3.04	186	3.05	187	3.21	185	2.98	186	3.16
Black	89	2.94	89	2.88	88	3.03	87	2.66	85	3.08
Other	42	3.00	43	2.81	42	3.02	42	2.74	41	3.05
Unknown	86	3.09	86	3.06	85	3.05	85	2.82	85	3.19
Total	**2,786**	**3.11**	**2,789**	**3.05**	**2,771**	**3.20**	**2,764**	**2.97**	**2,756**	**3.14**

Similarly, Hispanic and Asian students both had higher means for global awareness (3.16 for both), while other groups had means ranging from 2.98 to 3.08 (excluding unknown ethnicity), with white students having a mean below 3.00 at 2.98, indicating they do not feel they are improving on global awareness as much as the other groups.

For written and oral communication, Hispanic students rated their level of improvement much higher than all other groups (3.15 compared to 2.89-3.04, excluding unknown ethnicity). White students and black students both had means below 3.00 (2.89 and 2.94, respectively), indicating that these two groups do not feel they are improving as much as other ethnic groups.

As mentioned above, the overall mean for math competency was a relatively low 2.97. Black students rated their level of improvement in math the lowest out of all of the ethnicity groups (2.66), while Hispanic students, rated themselves above the overall mean at 3.00, the highest group.

Since Hispanic students comprise over three-quarters of the LAMC student body and of the survey population, they are the most well-represented among the survey responses. Some of the other ethnicity groups (particularly "black" and "other") had a much smaller number of survey responses, and their results may be less reliable. As above, more data is needed to determine whether a performance gap actually exists.

Differences by Age

The 22-25 age groups rated themselves the highest in terms of improvement in written and oral communication and problem solving (fig. 4). The traditional college age cohort of 18-21 year olds rated themselves the highest in math competency, followed closely by 22-25 year olds. For global awareness, however, 31-40 year olds rated themselves significantly higher than other age groups.

Except for information competency, older students tended to rate their level of improvement lower than younger students. Both 41-50 year olds and the over 50 age group rated their improvement in problem solving below 3.00 (2.96 and 2.97, respectively), and the mean for the over 50 age group in written and oral communication was 2.95. These results may be due to their already having acquired the skills needed prior to enrolling at LAMC.

Students under 18 years of age rated themselves the lowest of all age groups for information competency. These students are unlikely to have been at Mission for very long and may not have had previous exposure or instruction in the skills pertaining to information competency. However, since older students have higher means, this may indicate that they acquire these skills while in college.

As mentioned above, math competency is an area needing improvement, with five out of the seven age groups showing means below 3.00.

Figure 4: Results by Age

	Written & Oral Communication		Information Competency		Problem Solving		Math Competency		Global Awareness	
Age	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**
Under 18	484	3.01	481	2.98	481	3.13	479	2.90	477	3.04
18-21	1,079	3.12	1,079	3.03	1,073	3.21	1,066	3.01	1,058	3.13
22-25	637	3.19	641	3.11	639	3.28	638	3.00	638	3.19
26-30	211	3.12	216	3.02	213	3.22	215	2.91	213	3.08
31-40	222	3.03	222	3.13	218	3.19	222	2.95	219	3.26
41-50	87	3.05	87	3.03	85	2.96	83	2.77	87	3.15
Over 50	63	2.95	63	3.17	62	2.97	61	2.80	64	3.20
Total	**2,783**	**3.11**	**2,789**	**3.05**	**2,771**	**3.20**	**2,764**	**2.97**	**2,756**	**3.14**

Differences by Income Level

Survey data was also disaggregated according to three additional variables: student income level, previous family college attendance and units completed. The majority of students at LAMC are low-income students. In the survey sample, 64% of survey respondents were low-income (fig. 5).

Figure 5: Survey Respondents by Income Level

	Survey Respondents	
Income Level	**N**	**%**
Low-Income	1,588	64.3%
Not Low-Income	880	35.7%
Total	**2,468**	**100.0%**

Low-income students indicated a greater degree of improvement than non-low-income students for all five ILOs (fig. 6). As above, they may be rating their learning higher due to lower expectations, lower initial skill levels and/or more "lenient" rating, while showing the same level of achievement as non-low income students. More data is needed to determine actual levels of improvement/achievement.

Figure 6: Results by Income Level

	Written & Oral Communication		Information Competency		Problem Solving		Math Competency		Global Awareness	
Income Level	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**
Low-Income	1,550	3.14	1,556	3.11	1,544	3.23	1,544	3.00	1,543	3.16
Not Low-Income	862	3.08	865	2.95	861	3.17	853	2.91	852	3.09
Total	**2,412**	**3.12**	**2,421**	**3.05**	**2,405**	**3.21**	**2,397**	**2.97**	**2,395**	**3.14**

Differences by Previous Family College Attendance

Many LAMC students are the first in their family to attend college. In the survey sample, 56% of survey respondents were first-generation college students (fig. 7).

Figure 7: Survey Respondents by Previous Family College Attendance

	Survey Respondents	
College Experience	**N**	**%**
First-Generation	1,525	55.7%
Not First-Generation	1,213	44.3%
Total	**2,738**	**100.0%**

Similar to low-income students, first-generation students also expressed a greater degree of improvement across the board than students with parents who have college experience (fig. 8). They

may also be rating their learning higher due to lower expectations, lower initial skill levels and/or more "lenient" rating. Again, more data is needed to determine actual levels of improvement/achievement.

Figure 8: Results by Previous Family College Attendance

	Written & Oral Communication		Information Competency		Problem Solving		Math Competency		Global Awareness	
First Generation	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**
First-Generation	1,486	3.17	1,490	3.10	1,480	3.24	1,478	2.99	1,477	3.21
Not First-Generation	1,187	3.02	1,191	2.98	1,184	3.15	1,178	2.93	1,172	3.05
Total	**2,673**	**3.10**	**2,681**	**3.05**	**2,664**	**3.20**	**2,656**	**2.96**	**2,649**	**3.14**

Differences by Units Completed

As ILO competencies are acquired throughout a student's college career, students who have been in college longer should in theory have acquired more of these skills than those who are just starting. Since the majority of Mission College students are part-time, we have used cumulative units completed rather than number of terms enrolled as a measure of length of attendance. As figure 9 shows, students who have taken more units do, in fact, report higher levels of improvement for all five ILOs. The only exception to this is students with 45-59 units for written and oral communication.

Figure 9: Results by Length of College Attendance

	Written & Oral Communication		Information Competency		Problem Solving		Math Competency		Global Awareness	
Units Completed	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**
Less than 15 units	1,053	2.97	1,053	2.91	1,047	3.08	1,044	2.79	1,037	3.01
15-29 units	572	3.09	573	3.03	569	3.23	569	2.97	565	3.10
30-44 units	391	3.21	392	3.12	391	3.24	389	3.02	390	3.23
45-59 units	279	3.19	280	3.17	278	3.25	276	3.13	276	3.26
60 or more units	479	3.29	482	3.27	477	3.35	477	3.22	479	3.32
Total	**2,774**	**3.11**	**2,780**	**3.05**	**2,762**	**3.20**	**2,755**	**2.97**	**2,747**	**3.14**

Differences by Previous Degree

While the general trend of more units = better attainment of ILO competencies is true, community colleges enroll students of all educational backgrounds, including students who have previously completed bachelor's and associate's degrees. These students may report different results than those who are pursuing a first degree. Approximately 3% of survey respondents reported previously receiving either a bachelor's or an associate's degree. Unsurprisingly, these students reported lower levels of improvement for all five ILOs (fig. 10).

Figure 10: Results by Previous Degree

	Written & Oral Communication		Information Competency		Problem Solving		Math Competency		Global Awareness	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
Previous Degree	85	3.01	86	2.99	86	3.17	86	2.88	85	3.11
All Respondents	2,783	3.11	2,789	3.05	2,771	3.20	2,764	2.97	2,756	3.14

Global Awareness

An additional question was asked about global awareness. This question asked how often students at LAMC have serious conversations with students who differ from them in terms of their religious beliefs, political opinions, or ethnic background. As above, the means below are calculated based on a scale of 1 to 4, with 4 indicating the highest frequency of contact.[2] Overall, students self-reported that they "seldom" had serious conversations with students of different backgrounds at LAMC (mean=2.08).

Men self-reported having slightly more frequent conversations with students of different backgrounds from themselves than women did (fig. 7). Black students self-reported the highest frequency of conversations with students of different backgrounds among the different ethnicity categories (mean=2.53). This may be a reflection of the small number of black students on campus - as black students comprise only a small proportion of the student body, interactions with other students on campus are likely to be with those of a different ethnicity. In comparison, Hispanic students, who comprise three-quarters of the student body, reported far less interactions with students of different backgrounds from themselves (mean=2.05).

Traditional college-age students (18-25) self-reported the highest frequency of interactions with students of different backgrounds. This may be due to the higher proportion of those students who are enrolled full-time and are therefore on campus for longer periods of time, both in class and outside of class, than older students or concurrently enrolled high school students.

In addition, low-income students had a slightly higher frequency of serious conversations with students from different backgrounds than non-low-income students, but first-generation students had fewer conversations than students whose parents had college experience.

[2] Actual survey response options were: 1=Never, 2=Seldom, 3=Sometimes, 4=Often.

Figure 13: Global Awareness

	N	Mean
Total Responses	**2,750**	2.08
Gender		
Female	1,568	2.03
Male	1,182	2.14
Ethnicity		
Hispanic	2,095	2.05
White	248	2.20
Asian/Pacific Islander	190	2.17
Black	87	2.53
Other	44	2.00
Unknown	86	1.92
Age		
Under 18	475	1.99
18-21	1,063	2.11
22-25	639	2.15
26-30	212	2.08
31-40	213	2.00
41-50	84	2.06
Over 50	64	1.92
Income Level		
Low-Income	1,593	2.10
Not Low-Income	874	2.06
First Generation		
First-Generation	1,513	2.06
Not First-Generation	1,214	2.11

Conclusion

Overall, students self-reported that they feel they are attaining the skills identified in the College's ILOs. Students self-reported the most improvement in problem solving and the least amount of improvement in math competency (quantitative reasoning).

Female students rated their improvement higher than male students on all ILOs except math competency. Hispanic students, who comprise over three-quarters of the student population at LAMC, rated their improvement the highest among all ethnic groups for all four ILOs assessed. Younger students tended to rate their improvement level higher than older students. Low-income and first-generation students also rated their improvement higher than their counterparts for all four ILOs. Overall, students who had completed more units reported more improvement than those with fewer units. In most cases, number of units completed correlated with degree of improvement.

There are a few limitations to the data in this report. First, it is based on a survey that measures student perceptions, not actual achievement. There may be a considerable gap between the two. Second, initial skill level was not taken into account. Students who begin at a lower level have more room for improvement, while those who have already attained a high level of competency are unlikely to report additional improvement. This is evidenced by the fact that those who had previously completed a bachelor's or associate's degree reported lower levels of achievement than those pursuing their first degree.

It is hoped that this report will spur discussions on how to identify and address gaps between different groups in order to improve institutional learning outcomes for all students.