EVIDENCE TEAM REPORT
ILO 4 INFORMATION AND TECHNOLOGY LITERACY
ASSESSMENT AND REVIEW
Spring 2015

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Institutional Learning Outcome Statement

Institutional Learning Outcome (ILO) 4 Information and Technology Literacy is: Define what information is needed to solve a real-life issue and then use appropriate technologies to locate, access, select, and manage information. Examples include, but are not limited to:

- Use a computer to perform basic functions appropriate to the classroom and workplace,
- Select and use technology appropriate for the task,
- Determine the nature and extent of information needed,
- Locate, access, manage, and evaluate information from multiple sources,
- Use information ethically and legally, and
- Develop the ability to understand the applications and implications of technology in society (Allan Hancock College Catalog 2014-15).

Previous Review

In spring 2012, an evidence team reviewed Information and Technology Literacy (ILO 4). The team reported that the students did not meet the 70% benchmark of "professional/advanced or competent" rating in any of the six dimensions defined in the rubric. The students fared a range of 24.7-55.3% as professional/advanced or competent" (Refer: Table 1).

Table 1. 2012 Evidence Team Report

	Competent or Professional/Advanced	Average Rating	Standard Deviation
Uses a clearly expressed research question and/or thesis to determine the extent of information needed	54.5%	2.51	0.78
Accesses and retrieves needed information from a variety of appropriate resources	42.3%	2.32	0.76
Critically evaluates information and its sources	54.5%	2.43	0.75
Uses information and technology effectively to create a final product within the specifications of the assignment (analytical)	55.3%	2.51	0.75
Uses information and technology effectively to create a final product within the specifications of the assignment (technical)	24.7%	1.99	0.77
Accesses and uses information ethically and legally	27.9%	2.07	0.78

They identified sources of the ratings disparities. The artifacts were not designed for all the dimensions of the rubric. They felt that they were not subject experts and found that the intensive artifact assessment was not sustainable. The findings did not, however, rule out that the students were not 'competent" in the knowledge and skills embedded in the institutional learning outcome. They made these recommendations:

Recommendation: The nature of ILO – Information and Technology Literacy

There is a need to define "technology competency" to ensure student readiness for transfer and/or workforce as well as assess the appropriate skills. The institution should consider the relationship between information literacy and technology literacy and split the institutional learning outcome.

Recommendation: Assessing the ILO

The rubric needed revision. It can be used across curricula to assess the ILO. They suggested follow-up with faculty who participated in the study. They supported use of entry-level pre-tests to establish benchmarks and post-tests to determine student progress. They stated the need to refine the process of assessing institutional learning outcomes - course selection for representative sample size and random selection and interpretation of results and considered use of eLumen reports. They furthered that more information from student support services, like AHC Library User Survey, should be included in ILO assessment.

Recommendation: Teaching Information and Technology Literacy

They identified the need to clarify the institutional expectations for information and technology literacy at various levels of the curricula like levelled proficiency for 100-level courses. Teaching information and technology literacy needed to be institution-wide with appropriate planning, coordination, cooperation, and reflection. They suggested professional development for academic affairs and student services on information and technology literacy.

Intentional Actions for Improvement

Recommendation: The nature of ILO – Information and Technology Literacy

In spring 2014, the Learning Outcomes and Assessment Committees – Academic Affairs (LOAC-AA) began discussions about the recommendations of ILO 4 evidence team (spring 2012). Department meetings were visited in fall 2014 (Sept through mid-Nov) by Liz West and Jennie Robertson to report on the recommendation to split ILO 4 into two separate ILOs. One hundred twenty one (121) faculty were surveyed - 25% said "yes" to the split, 10% said "no", and 65% were "neutral". The neutral majority indicated that they did not either have a definitive opinion or enough information to make a choice. Based on the high neutral majority, LOAC-AA suggested that the ILO would be presented as one but with two sub categories, ILOs -4A Information Literacy and 4B Technology Literacy. The Student Learning Council approved the proposal in November 2014. The College Council approved the modification on February 2, 2015. On February 17, 2015, the modified ILO 4 was an information item in the Board of Trustees agenda.

> ILO 4A: Information Literacy. "Define what information is needed to solve a real-life issue and locate access, evaluate, and manage the information.
> ILO 4B: Technology Literacy. "Proficiency in a technology (specify: _____) and the ability to choose the appropriate tools."

Recommendation: Assessing the ILO

The 2015 team revised the rubric to reflect the split of the ILO into Information Literacy (4A) and Technology Literacy (4B). Two rubrics were created. Instead of limiting the faculty to those who participated in the previous study, the team opted to reach out to all faculty who mapped their course student learning outcomes to ILO 4. Through a detailed instruction and request for feedback and

possible integration of the rubrics in future student coursework, they worked on remapping the course student learning outcomes to the two ILO subcategories. The sample size was based on availability of eLumen reports. Emails were sent to seek surveys conducted by the student services programs related to this ILO. The use of pre- and post-tests were not included in the plan for this study.

Recommendation: Teaching Information and Technology Literacy

Upon completion of the study, the team plans on presenting the findings and obtaining college-wide feedback for further studies and next actions to best promote information literacy and technology literacy.

Purpose

The spring 2015 evidence team met the scheduled first year assessment cycle for ILO 4 as outlined in the 2014 AHC Institutional Assessment Plan. The team was charged with complying with the Step C of the assessment cycle that included: assess outcomes per assessment plan, evaluate assessment results, and decide if outcomes met established goals. Subsequent actions (Step D) included: discuss areas of instruction or processes that could be changed to improve outcomes; and then implement those changes. (Refer: Figure 1).

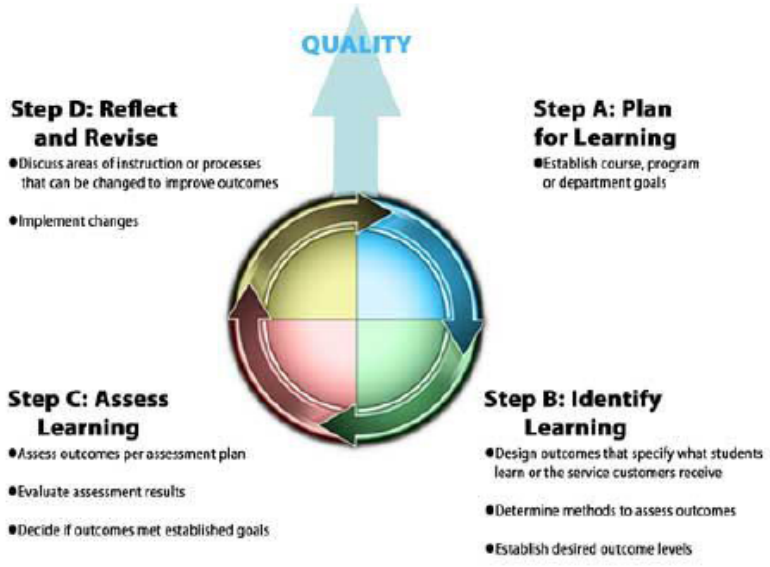

Figure 1. Diagram of the Student Learning Outcomes and Assessment Cycle

Methodology

The evidence team discussed the different strategies of obtaining data. With strong consideration for reducing impact on faculty time and effort, they developed the rubrics, facilitated course remapping, and gathered eLumen data.

Development of Rubrics

The rubrics were based on the current definition of ILO 4 and its two subcategories. It was aligned with the institutional rubric used across campus and in eLumen - exceeds standards (3), meets standards

(2), and below standards (1). The team included a "no evidence" option for non-inclusion of student assessments as faculty-deemed appropriate (Refer: Rubric 1 and 2). They added a space to enable faculty to indicate a specific technology (Refer: Rubric 2).

Rubric 1. ILO 4A: Information Literacy

"Define what information is needed to solve a real-life issue and locate access, evaluate, and manage the information.

	Exceeds (3)	Meets (2)	Below (1)	No Evidence (0)
Determine the nature and extent of the information needed	Clear, focused, and thorough determination of the nature and extent of information needed	Adequate determination of the nature and extent of information needed	Unclear, unfocused, and/or poorly defined determination of the nature and extent of the information needed	
Locate, access, manage, and evaluate information from multiple sources	Uses multiple sources of information. Consistent use of credible, reliable, current, and unbiased sources of information. Thoroughly manages information to meet the purpose of study. The information has been thoroughly analyzed, conclusions have been drawn, and main ideas have been synthesized in the most effective manner.	Uses adequate number of sources of information. Predominant (with minor inconsistent) use of credible, reliable, current, and unbiased sources of information. Adequately manages information to meet the purpose of the study. There is an adequate attempt at analyzing/drawing conclusions based on information gathered; a reasonable synthesis of information.	Uses limited number of sources of information. Absence of use of credible, reliable, current, and unbiased sources of information. Fails to manage information to meet the purpose of the study. No attempt at analyzing/drawing conclusions based on the information gathered; minimal/ineffective attempt at synthesizing the information.	
Use information ethically and legally	Excellent use of in-text citations and references in which all sources are annotated and correctly cited in MLA/APA format. Creative and appropriate paraphrasing of information. Clearly reflects an understanding of plagiarism and falsification of information.	Good use of in-text citations or references in which most sources are annotated and correctly cited in MLA/APA format. Reasonable paraphrasing of information. Reflects an understanding of plagiarism and falsification of information.	Poor or improper use of in-text citations or references in which few sources are annotated and correctly cited in MLA/APA format. Improper use and poor paraphrasing of information. Doesn't reflect a clear understanding of plagiarism or falsification of information.	

Rubric 2. ILO 4B: Technology Literacy

"Proficiency in a technology (specify: _____) and the ability to choose the appropriate tools."

	Exceeds (3)	Meets (2)	Below (1)	No Evidence (0)
Selects technology appropriate to the coursework or task	Thoroughly selects technology appropriate for the coursework or task	Adequately selects technology appropriate for the coursework or task	Poorly selects technology appropriate for the coursework or task	
Uses technology to perform functions appropriate to the coursework or task	Proficient manipulation of technology to complete coursework or task	Competent manipulation of technology to complete coursework or task	Poor manipulation of technology to complete coursework or task	
Understands the ethical and legal implications of technology in society	Demonstrates a thorough understanding of the ethical and legal implications of technology in society	Demonstrates an adequate understanding of the ethical and legal implications of technology in society	Fails to demonstrate an understanding of the ethical and legal implications of technology in society	

Course Re-mapping

In 2010-2012, the institutional research and planning (IRP) collected mapping forms for each course. Each team member was provided a list of courses that were mapped to ILO 4 and the corresponding mapping forms. Through an email request, they provided specific instructions regarding remapping to faculty and/or department chair responsible for the course. They also conducted follow-up phone calls, verbal reminders, and email. (Refer: Email Template)

Figure 2. Email Template

Happy spring semester 2015! You are receiving this email because you teach a course with a student learning outcome mapped to the Information and Technology Literacy ILO (#4). Based on the assessment process, we have split this ILO into two separate sections (4A and 4B) and now you need to pick whether your course outcome maps specifically to 4A or 4B.
Here are the revised definitions of ILO 4A and 4B:

A: Information Literacy: *"Define what information is needed to solve a real-life issue and locate, access, evaluate and manage the information."*
B: Technology Competency/Literacy: *"Proficiency in a technology (specify: _____) and the ability to choose the appropriate tools."*

Your original mapping form(s) is/are also attached. Please revise your form, for any course learning outcome that has been mapped to ILO #4, by replacing the "X" with either an "A" (information literacy) or "B" (technology literacy)

We also developed two new rubrics (attached) to assist instructors in assessing student success on both ILO 4A and ILO 4B.

Please **respond no later than MONDAY, MARCH 2 with your updated new mapping form/s**.

You are invited to participate in data-gathering directly related to this ILO during this semester. More information will be sent soon. Your input is invaluable in evaluating this ILO!

Thank you,
ILO 4A and ILO 4B Team (Susie K, Liz W., Juanita T., David B., and Larry M.)

Gather eLumen Data

Jennie Robertson, learning outcomes analyst, collected eLumen data on academic affairs and student services programs. Academic Affairs assessed information literacy with: portfolios (ART 113), mid-term exams, laboratory assignments, and visual observations (AT 344), MyITLab assessments and chapter quizzes (CBIS 101), research papers, professional portfolios, and career and academic plans (ECS 303),

and quizzes and exercises (ET 100). Technology literacy assessments included quizzes and MyITLab Grader Projects (CBIS 371), technique evaluations (CBOT 100), administrative procedures check-offs (MA 352), final projects (MMAC 102), and Mastercam Programs (MT 111). The student services programs used surveys and Library Research Detective Worksheets for information literacy and Kurzweil Surveys for technology literacy. With such diverse assessment measures, it is unrealistic and may be inappropriate for the evidence team to assess these potential "artifacts" that may be beyond the team's expertise.

Direct Evidence

The evidence team waited for faculty responses and created strategies to facilitate ease of remapping ILO 4. In addition to remapping instructions, the faculty were encouraged to give feedback and possible consider the use of the ILO 4 rubrics. To date, there was no faculty feedback or commitment to use the rubric in assessing student work. This raised the question: "Is there a realistic time during the academic year that would be most amenable to gathering data for assessment of institutional learning outcomes?"

In a survey conducted in fall 2013, thirty percent (30%) of departments completed eLumen reports within the semester while seventy percent (70%) completed eLumen reports at the beginning of the following (spring) semester. The faculty habits may be considered in determining inclusive dates for data collection for subsequent ILO studies. (Refer: Table 2.)

Table 2. AHC Faculty Habits

Data collected in fall term is entered	Response
Within the fall term	3 (30%)
Start of spring term	7 (70%)

*There are departments that include e-Lumen data entry as part of the department retreat at the beginning of the semester.

One hundred and sixty four (164) courses were mapped to ILO 4 between summer 2012 and spring 2014. Twenty six (26) courses were mapped to ILO 4 A (Information Literacy) and had data (16%) and fifty three (53) courses were mapped to ILO 4B (Technology Literacy) and had data (32%). Six (6) courses were mapped to both ILO 4A and 4B (4%). (Refer: Table 3). Three student services programs, Counseling, CalWORKS, and Library Services, were mapped to information literacy (ILO 4A) while Learning Assistance Program (LAP) was mapped to technology literacy (ILO 4B). The evidence team used available eLumen data in lieu of assessing faculty submission of artifacts.

Table 3. Sample Size

Total courses: 164

Courses with available data at the time of report: 79 (48%)

Mapped to ILO 4A with data	26 (16%)
Mapped to ILO 4B with data	53 (32%)
Mapped to both ILO 4A and 4B*	6 (4%)

*These courses have multiple SLOs mapped to ILO 4A and 4B.

Within the inclusive terms (summer 2012 to spring 2015), the academic affairs reported nine hundred eighty (56.71%) student assessments that exceeded standards, six hundred twenty two (36%) met

standards, and one hundred twenty six (7.29%) were below standards for information literacy (Table 4). Data were not available in summer 2014 and spring 2015.

Table 4. ILO 4A Information Literacy - Academic Affairs (by Term)

Term	Exceeds Standards		Meets Standards		Below Standards	
Summer 2012	37	56.06%	25	37.88%	4	6.06%
Fall 2012	183	45.07%	196	48.28%	27	6.65%
Spring 2013	125	60.39%	51	24.64%	31	14.98%
Summer 2013	15	78.95%	4	21.05%	0	0%
Fall 2013	209	55.44%	139	36.87%	29	7.69%
Spring 2014	151	74.38%	41	20.20%	11	5.42%
Summer 2014	0	0%	0	0%	0	0%
Fall 2014	260	57.78%	166	36.89%	24	5.33%
Spring 2015	0	0%	0	0%	0	0%
Overall	**980**	**56.71%**	**622**	**36.00%**	**126**	**7.29%**

Table 5 presented data on technology literacy among courses in academic affairs. Within the inclusive terms (summer 2012 to spring 2015), 1350 (53.19%) exceeded standards, eight hundred sixty three (34%) met standards, and three hundred twenty five (12.81%) did not meet standards.

Table 5. ILO 4B Technology Literacy – Academic Affairs (by Term)

Term	Exceeds Standards		Meets Standards		Below Standards	
Summer 2012	20	17.24%	84	72.41%	12	10.34%
Fall 2012	370	49.47%	243	32.49%	135	18.05%
Spring 2013	255	66.93%	87	22.83%	39	10.24%
Summer 2013	64	80.00%	14	17.50%	2	2.50%
Fall 2013	161	50.31%	136	42.50%	23	7.19%
Spring 2014	267	59.87%	109	24.44%	70	15.70%
Summer 2014	5	33.33%	10	66.67%	0	0%
Fall 2014	204	47.78%	180	42.15%	43	10.07%
Spring 2015	4	80.00%	0	0%	1	20.00%
Overall	**1350**	**53.19%**	**863**	**34.00%**	**325**	**12.81%**

Regarding information literacy among student services programs, Table 6 provided a breakdown: counseling (2.61%), CalWORKS (12.07%), and Library Services (85.32%). Table 7 indicated that the student services programs had three hundred sixty six (59.71%) exceeded standards, two hundred two (32.95%) met standards, and forty five (7.34%) were below standards for information technology (ILO 4A). There were no data for summer 2012, fall 2012, summer 2013, and spring 2015.

Table 6. ILO 4A – Information Literacy (by Student Services Programs)

	Exceeds Standards		Meets Standards		Below Standards	
Counseling	12	75.00%	2	12.50%	2	12.50%
CalWORKS	58	78.38%	16	21.62%	0	0%
Library Services	296	56.60%	184	35.18%	43	8.22%
Overall	**366**	**59.71%**	**202**	**32.95%**	**45**	**7.34%**

	Total	Percent
Counseling	16	2.61%
CalWORKS	74	12.07%
Library Services	523	85.32%

Table 7. ILO 4A – Information Literacy – Student Services Program (by Term)

Term	Exceeds Standards		Meets Standards		Below Standards	
Summer 2012	0	0%	0	0%	0	0%
Fall 2012	0	0%	0	0%	0	0%
Spring 2013	58	78.38%	16	21.62%	0	0%
Summer 2013	0	0%	0	0%	0	0%
Fall 2013	110	60.77%	55	30.39%	16	8.84%
Spring 2014	115	47.52%	103	42.56%	24	9.92%
Summer 2014	0	0%	0	0%	0	0%
Fall 2014	83	71.55%	28	24.14%	5	4.31%
Spring 2015	0	0%	0	0%	0	0%
Overall	**366**	**59.71%**	**202**	**32.95%**	**45**	**7.34%**

In spring 2014, Learning Assistance program reported that twenty five (78.13%) exceeded standards and seven (21.88%) met standards for technology literacy. (Refer: Table 8).

Table 8. ILO 4B – Technology Literacy -Learning Assistance Program, Spring 2014

	Exceeds Standards		Meets Standards		Below Standards	
Learning Assistance Program	25	78.13%	7	21.88	0	0%
Overall	**25**	**78.13%**	**7**	**21.88**	**0**	**0%**

*This is the only available data from summer 2012 to spring 2015.

Indirect Evidence

According to the spring 2013 Distance Learning survey, thirty two to thirty four student respondents who aimed for certificates (12.1%), associate degrees (18.2%), bachelor's degrees (24.2%), and masters or higher (45.5%) and frequently attended online courses (66.7%) reported good-excellent quality of instruction (72.8%) and good-excellent (78.8%) technical support (Refer: Table 9a-c and Table 9d-f). The student respondents also found that compared to face-to-face classes, they had less contact with the instructors in online offerings (Table 9g).

Table 9a-c. Distance Learning Survey

How many units are you currently enrolled in? (n=34)		How many units have you completed prior to this semester? (n=34)		What is your final academic goal? (n=33)	
0-5	41.2%	0-15	11.8%	Certificate	12.1%
5.5-8.5	8.8%	16-30	26.5%	AA/AS	18.2%
9-11.5	11.8%	31-45	11.8%	Bachelors	24.2%
12 or more	38.2%	46-60	23.5%	Masters or higher	45.5%
		61 or more	26.5%		

Table 9d-f. Distance Learning Survey

How often do you take online courses? (n=33)		How would you rate technical support for your online course? (n=33)		How do you feel about the quality of your online course has been? (n=33)	
Always	18.2%	Excellent	18.2%	Excellent	27.3%
Frequently	48.5%	Good	60.6%	Good	45.5%
Seldom	30.3%	Fair	12.1%	Fair	21.2%
Never	3%	Poor	9.15%	Poor	6.1%

Table 9g. Distance Learning Survey

How is contact with your instructor in an online course compared to contact with your instructor in a face-to-face course? (n=32)	
More contact in online course	15.6%
Similar	28.1%
Less contact in online course	53.1%

No opinion	3.1%

The Distance Learning survey reviewed student engagement in the innate features of online education, in general, and BlackBoard, in particular. The student respondents indicated that BlackBoard was good-excellent (75.8%), preferred electronic software package (26.5%), and preferred online courses because of these reasons: convenience (79.4%), flexibility (79.4%), work at own (64.7%), and work at home (70.6%). (Refer: Table 9g-i). Regarding the specific features of BlackBoard, they had multiple levels of satisfaction (Refer: Table 10). The survey also included student write-in comments.

Table 9g-i. Distance Learning Survey

What is your opinion of BlackBoard? (n=34)		For online courses, what do you prefer to use for course materials? (n=33)		Of the following, which do you like best about online courses? Choose all that apply (n=34)	
Excellent	36.4%	Textbook only	11.8%	Convenience	79.4%
Good	39.4%	Electronic software package	26.5%	Flexibility	79.4%
Fair	18.2%	Combination of textbook and software	11.8%	Work at own pace	64.7%
Poor	6.1%			Work at home	70.6%
				Availability	52.9%
				Accessibility	32.4%
				Communication	17.8%
				For fun	2.9%

Table 10. BlackBoard Survey

Course navigation (n=33)		Finding information quickly and easily (n=33)		Announcements (n=32)		Discussion boards (n=31)		Assignments (n=33)		Exams (n=32)		Wikis/ Blogs Journals (n=19)	
1	12.1%	1	12.1%	1	6.3%	1	6.5%	1	6.1%	1	6.3%	1	5.3%
2	3%	2	9.1%	2	3.1%	2	12.9%	2	3%	2	3.1%	2	10.5%
3	6.1%	3	6.1%	3	15.6%	3	6.5%	3	18.2%	3	9.4%	3	21.1%
4	15.2%	4	24.2%	4	21.9%	4	22.6%	4	33.3%	4	31.3%	4	5.3%
5	63.6%	5	48.5	5	53.1%	5	51.6%	5	39.4%	5	50%	5	57.9%

Note: 1 - not satisfied and 5 - satisfied

The spring 2013 Library Services Survey had eighty three to eighty seven student responses. It was a survey that detailed student preferences: library locations, frequency, in person or online, and intent among students with various educational goals and semester load.

Table 11a. Library Services Survey

Which Allan Hancock College library location do you use? Choose all that apply. (n=87)	
Santa Maria campus library	94.3%
Lompoc Valley Center library	12.6%
Online library	26.4%

Table 11b-j. Library Services Survey

How many units are you currently enrolled in? (n=86)		How many units have you completed prior to this semester? (n=87)		What is your final academic goal? (n=85)	
0-5	10.5%	0-15	42.5%	Certificate	4.7%
5.5-8.5	20.9%	16-30	14.9%	AA/AS	25.9%
9-11.5	26.7%	31-45	13.8%	Bachelors	30.6%
12 or more	41.9%	46-60	13.8%	Masters or higher	27.1%
		61 or more	14.9%	Undecided	11.8%

How many times per semester do you typically use the AHC library in person? (n=77)		How many times per semester do you typically visit the library website? (n=85)		If you have come with a class to the library for a formal library orientation, did it help you improve your grade on an assignment? (n=86)	
5+ times	55.8%	5+ times	41.2%	Yes	51.2%
3-4 times	27.3%	3-4 times	29.4%	No	4.7%
1-2 times	15.6%	1-2 times	25.9%	Have not come for orientation	32.6%
Never	1.3%	Never	3.5%	Don't know	11.6%

Do you use the library (in person or online) for online classes? (n=86)		I am able to find information or materials I need in the library (n=86)		In general. I use the library's resources as a way to learn new information and discover more about the world I live in (n=86)	
Yes	41.9%	Always	32.6%	Always	16.3%
No	14%	Frequently	48.8%	Frequently	26.7%
I do not take online classes	44.2%	Sometimes	17.4%	Sometimes	46.5%
		Rarely	0%	Rarely	9.3%
		Never	0%	Never	1.2%
		N/A	1.2%		

The Library Services study further explored reasons for coming to the library (Table 12a), reasons for using the library website (Table 12b), and use of specific online resources (Table 12c). The findings were invaluable in multiple levels including student educational preferences and use of available information resources.

Table 12a. Reasons why you come to the library

	1	2	3	4	5
Study (n=86)	5.8%	4.7%	27.9%	10.5%	51.2%
Meet with a group (n=85)	20%	10.6%	40%	16.5%	12.9%
Hang out between classes (n=85)	22.4%	7.1%	18.8%	15.3%	16.5%
Ask a librarian for help (n=85)	18.8%	16.5%	27.1%	18.8%	18.8%
Borrow books or other materials(n=86)	4.7%	23.3%	18.6%	20.9%	32.6%
Find books and/or media (n=85)	8.2%	11.8%	30.6%	18.8%	30.6%
Use textbooks or other materials required for my classes ((n=85)	9.4%	24.7%	12.9%	17.6%	35.3%
Read print magazines, journals, or newspapers (n=86)	20.9%	19.8%	26.7%	12.8%	19.8%
Read eBooks (n=86)	32.6%	19.8%	25.6%	11.6%	10.5%
Find magazine, journal, or newspaper articles using online databases (Academic Search premier, SIRS, etc.) (n=86)	14%	12.8%	30.2%	18.6%	24.4%
Watch a video (DVD, VHS) (n=86)	53.5%	24.4%	14%	7%	1.2%
Use library computers for research or assignments (n=85)	8.2%	9.4%	23.5%	12.9%	45.9%
Use my laptop computer (n=86)	30.2%	11.6%	14%	14%	30.2%
Access BlackBoard or myHancock (n=85)	7.1%	7.1%	18.8%	8.2%	58.8%
Print or photocopy material (n=86)	12.8%	18.6%	11.6%	18.6%	38.4%
Attend meetings (n=85)	47.1%	21.2%	20%	4.7%	7.1%
Use a study room (n=84)	23.8%	11.9%	20.2%	15.5%	28.6%

Note: 1-Not a reason and 5-Essential

Table 12b. Reasons why you visit the library website

	1	2	3	4	5
Ask a librarian for help (eReference) (n=85)	22.4%	14.1%	24.7%	21.2%	17.6%
Use library catalog to find books and media (n=86)	8.1%	17.4%	24.4%	23.3%	26.7%
Read eBooks (n=86)	33.7%	14%	18.6%	19.8%	14%
Find magazine, journal, or newspaper articles using online databases (Academic Search premier, SIRS, etc.) (n=86)	18.6%	11.6%	15.1%	22.1%	32.6%
Use research guides (LibGuides) (n=86)	22.1%	11.6%	20.9%	23.3%	22.1%
Find out when the library is open (n=84)	23.8%	16.7%	19%	11.9%	28.6%

Note: 1-Not a reason and 5-Essential

Table 12c. When looking for information that I need for either class or personal use, I find the information I need using:

	1	2	3	4	5
Internet search engines (Google, Bing, etc.) (n=87)	0%	4.6%	4.6%	11.5%	79.3%
Other Internet sites (Wikipedia, etc.) (n=86)	1.2%	11.6%	17.4%	20.9%	48.8%
Library online article databases (Academic Search premier, SIRS, etc.) (n=87)	4.6%	16.1%	23%	32.2%	24.1%
Print newspapers, magazines, journals (n=87)	12.6%	33.3%	19.5%	18.4%	16.1%
Books (print or electronic) (n=87)	12.6%	21.8%	20.7%	26.4%	18.4%
LibGuides (online research guides) (n=86)	20.9%	25.6%	26.7%	10.5%	16.3%
Videos (VHS, DVD, etc.) (n=87)	48.3%	29.9%	9.2%	6.9%	5.7%

Note: 1-Never and 5-Several times a week

Findings

The current evidence study made assumptions. First, eLumen data from summer 2012 to spring 2015 provided an adequate sample size. Second, faculty assessment of ILO4-mapped course student learning outcomes (CSLO) used similar definition and intent of the institutional learning outcome. Third, remapping accounted for the specifics of either information literacy or technology literacy. And lastly, the discipline faculty was more able to assess student work and other assessment measures specific to the courses or programs.

The students overwhelmingly met the target benchmark of 70%. Academic affairs reported 92.71% exceeded/met standards for information literacy and 87.19% exceeded/met standards for technology literacy. Student services had 92.66% exceeded/met standards for information literacy and 100% exceeded/met standards for technology literacy. (Refer: Table 13). With remarkable differences in methodology, it is inappropriate to compare with the evidence study of 2012.

Table 13. Data Summary

	Academic Affairs				Student Services			
	Exceeds/Meets		Does Not Meet		Exceeds/Meets		Does Not Meet	
ILO 4A Information Literacy	1602	92.71%	126	7.29%	568	92.66%	45	7.34%
ILO 4B Technology Literacy	2213	87.19%	325	12.81%	32	100%	0	0%

*The spring 2012 evidence team set the benchmark at 70%.

The surveys conducted by the Distance Learning team and Library Services provided depth to the understanding of the impact of information access and available technology on the educational experience of the students. The predictive value of these surveys could be further studied and at this point, may be beyond the purview of the current evidence team.

Recommendations and Subsequent Steps

The search for best practice in gathering data for institutional learning outcomes continues to be elusive. The 2012 evidence study solicited artifacts for team assessment using the rubrics. There were questions regarding the sample size, the impact on discipline faculty, variables associated with ratings by non-discipline faculty and artifacts not specifically designed for the rubrics, and the time constraints on both the evidence team and the faculty. The current study applied strategies to reduce impact on discipline faculty. Instead of limiting the study to the current semester, the team broadened the data gathering to include terms after the last evidence study. In lieu of assessing faculty submitted artifacts, the team opted to give specific instructions to remap course student learning outcomes to the specific ILO 4 subcategory. There were no requests for voluntary faculty submission of artifacts. Extrapolating eLumen data reduced the tyranny of the urgent and provided another option in data gathering and interpretation.

The evidence team recommends:

- Continue to explore processes to monitor institutional learning outcomes (and various levels of student learning outcomes) efficiently and regularly with minimal impact/no additional burden of time and effort on the faculty and student services. For instance, ILO assessment can be integrated in established institution-wide course and program reviews.
- Continue to conduct regular surveys (like Distance Learning team and Library Services) in various student services programs to promote better understanding and implement strategies to meet the changing student needs.
- Integrate ILO rubrics in assessing student coursework and services (as deemed applicable and appropriate). The team believes that there would be more direct correlation of course student learning outcomes with the institutional learning outcomes. The current team provided an opportunity for faculty feedback and option to use the new rubrics.
- Use faculty feedback to continually define and refine the institutional learning outcomes. Through ongoing communication, these learning outcomes are more likely to be relevant and meaningful to students, faculty, staff, and college as a whole.
- Provide incentives for integration of ILO rubrics, timely reporting of assessment findings, and creative strategies to promote ongoing assessment of multiple levels of learning outcomes.
- Promote information and technology literacy (and other ILOs) to students, teaching and service faculty, and staff. Opportunities abound to have open discussions on how to best improve outcomes and essentially realize the outcomes the college promised the students and the community.
- Institute pilot projects on best using the features of eLumen in measuring institutional learning outcomes. For instance, in lieu of a college-wide assessment of institutional learning outcomes, it would prudent to consider pilot studies of volunteers who would actively engage in integrating ILO rubrics and report data in eLumen in a timely manner.
- Include student feedback and self-assessments regarding their attainment of institutional learning outcomes. In 2013, Library Services conducted AHC Library User Survey and student focus group.

Similar studies can be considered for use of BlackBoard, ease of registration, and other related college resources that promote student success.

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References

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