



Report of NSSE 2020 Results on Institutional-Level Competencies at the University of Hawai'i at Mānoa

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Executive Summary

This report analyzes the results of the National Survey of Student Engagement (NSSE), administered in spring 2020 at the University of Hawai'i at Mānoa (UHM), with a high response rate of 52%. A total of 870 undergraduate freshmen and 1694 undergraduate seniors responded to the survey. The NSSE data is a valuable source of indirect evidence of student learning.

This study examines the difference between freshman and senior respondents' 2020 NSSE results and the difference between the 2015 and 2020 NSSE senior respondents' results related to four out of [five WASC core competencies](#) and [UHM undergraduate Institutional Learning Objectives](#) (ILOs), all referred to as competencies below. Similar competencies will be referred to as competency areas.

Main findings include:

1. The competency scores were higher for the 2020 seniors than 2020 freshmen on all but one competency. Competency scores for 2020 and 2015 seniors were similar, with 2020 seniors' scores slightly higher on most competencies.
2. Two competency areas that demonstrated the greatest educational impact were *conducting research* and *communication*, including both *oral* and *written communication*. The 2020 senior respondents had the greatest increase in competency scores over the freshmen in these two areas.
3. In addition, two ILOs – *Respect for people and cultures* (ILO 3b) and *Continuous learning and personal growth* (ILO 3a) had high competency scores.
4. *Quantitative reasoning* (WASC) and *Think critically and creatively* (ILO 2a) were two competencies in which UHM student respondents (2015 seniors, 2020 seniors, and 2020 freshmen) scored significantly lower than those from peer institutions on half or more of the items under these competencies.
5. 2020 seniors and freshmen had statistically significantly lower mean scores than those from peer institutions on half or more of the items related to *Stewardship of the natural environment* (ILO 3c).
6. The results related to civic learning were somewhat divergent. While both 2015 and 2020 seniors scored higher on most items related to *Civic participation in communities* (ILO 3d) than peers, our 2020 respondents, both seniors and freshmen, scored lower than peers on selected items in the *Civic Engagement* module, a separate module from the 2020 NSSE main survey. It is possible that UHM



seniors participated in civic life more through service-learning and volunteering than in activities that exercise social and civic influence such as organizing others to work on state, national, or global issues.

7. UHM students experienced substantial personal and academic growth reflected in individual survey items that address research, field experience, participation in the community, student leadership, interaction with faculty, communication skills, collaboration in groups and projects, and combining ideas from multiple courses.

Background and Definition of Terms

The National Survey of Student Engagement (NSSE) is a major national survey used for higher education institutions to gauge undergraduate students' engagement. The University of Hawai'i at Mānoa (UHM) administers the NSSE every few years and has been using the data at both the institutional and program level. Chen (2020), Hill (2020), Pascua (2020), and Pearson (2020) illustrated how UHM has used NSSE results to support the work of different units and institutional accreditation. The NSSE administered in 2015 and in 2020 enjoyed high response rates, 32% and 52%, respectively. A total of 870 undergraduate freshmen and 1694 undergraduate seniors responded to the 2020 NSSE.

Selected NSSE Items as Learning Evidence

The [NSSE](#) in general consists of two types of questions: (1) student efforts and activities and (2) institutional resources and learning opportunities. Even though UHM values direct assessment of student learning through evaluation of student products and performances, NSSE items that capture students' self-reported academic efforts, participation in activities, and self-assessment of their abilities are valuable as **indirect** evidence of learning because they reflect students' knowledge, skills, and dispositions. UHM needs data and results on institutional-level competencies that include:

1. Western Association of Schools and Colleges (WASC) Senior College and University Commission (WSCUC) core competencies, specified in its 2013 Handbook of Accreditation under [Standard 4 and criteria CFR2.2a](#), which include:
 - 1) *Written communication*
 - 2) *Oral communication*
 - 3) *Quantitative reasoning*
 - 4) *Information literacy*
 - 5) *Critical thinking*
2. UHM Undergraduate Institutional Learning Objectives (ILOs), which include:
 - 1) Know – Breadth and depth of knowledge



- a. *General education (ILO 1a)*
 - b. *Specialized study in an academic field (ILO 1b)*
 - c. *Understand Hawaiian culture and history (ILO 1c)*
- 2) Do – Intellectual and practical skills
- a. *Think critically and creatively (ILO 2a)*
 - b. *Conduct research (ILO 2b)*
 - c. *Communicate and report (ILO 2c)*
- 3) Value – Personal and social responsibility
- a. *Continuous learning and personal growth (ILO 3a)*
 - b. *Respect for people and cultures (ILO 3b)*
 - c. *Stewardship of the natural environment (ILO 3c)*
 - d. *Civic participation in their communities (ILO 3d)*

The NSSE includes a main survey and separate topical modules that institutions can select from, such as *Information Literacy*, *Diversity*, *Civic Engagement*, and *Sustainability*. In 2017, an expert panel, the ILO Implementation Committee (ILOIC), identified the relevant items on the 2015 NSSE main survey and the Information Literacy and Diversity modules that aligned with the five WASC core competencies and six out of ten ILOs (2a, 2b, 2c, 3a, 3b, and 3d). See a detailed description of the methodology in Hill (2019). This analysis includes data from 42 out of 117 items on the 2020 NSSE main survey which were identified as relevant for indirect learning assessment. The 2020 NSSE did not include the Information Literacy and Diversity modules. Since all items related to the WASC competency *Information literacy* were on the 2015 NSSE Information Literacy module, we did not have data to assess this competency in the 2020 NSSE.

The 2020 NSSE provided additional data to assess civic learning and *Stewardship of the natural environment* (ILO 3c) through its *Civic Engagement* and *Sustainability* modules. To assess these two competency areas, we selected the items that reflect students' self-assessment of their effort, activity, and ability – 14 from the *Civic Engagement* module and 11 from the *Sustainability* module. We treat *Civic engagement* as a separate competency from *Civic participation in their communities* (ILO 3d), as engagement does not necessarily imply participation, but it is a very important aspect of civic learning that UHM emphasizes and it is related to ILO 3d.

In summary, this analysis includes relevant NSSE items to assess four out of five WASC core competencies (excluding *Information literacy*) and seven out of ten ILOs (all ILOs under *Do* and *Value*, 2a to 2c and 3a to 3d). The included NSSE items are in Appendix A and Appendix B.



Key Terms and Definitions

This report uses the word **competency** as a broad reference to the WASC core competencies, UHM Undergraduate ILOs, and other learning areas of interest (e.g., civic engagement). Each survey item has an **outcome score**, which is defined as the proportion of the students who reported frequent participation (by choosing *Often* or *Very often* response options) or substantial learning (by choosing *Quite a bit* or *Very much* or equivalent response options). Appendix A lists all competencies, the aligned items under each competency, the response options that count towards frequent participation or substantial learning, the proportion of the students who reported frequent participation or substantial learning, i.e., the item outcome score, and peer comparison results for the 2020 NSSE freshmen and senior respondents. Appendix B lists the same information for the 2015 and 2020 NSSE senior respondents.

To form a big picture of how well each competency was achieved, we calculated the **competency score**, defined as the median outcome score on all the items aligned with a particular competency, which represents the median proportion of the respondents who claimed frequent participation or substantial learning on the competency-aligned NSSE items.

The undergraduate senior respondents will be referred to as seniors and the undergraduate freshmen respondents will be referred to as freshmen in this report.

Three indicators can help reveal the level of competency achievement and the impact of the educational experience on UHM students.

1. **Competency score.** A high competency score represents a high proportion of respondents who reported frequent participation or substantial learning on a median item. However, since some tasks (e.g., writing a long paper) are inherently harder to achieve than others (e.g., writing a short paper), we need to adjust our own expectations in terms of what counts as a high competency score. For example, 24% sounds like a low competency score, but when used to represent *Conduct research* (ILO 2b), it implies that about a quarter of the UHM seniors reported that they conducted or were conducting a research project, which is a respectable result.
2. **Comparison with peers.** The NSSE provides the item mean score and how it compares with the score from peer institutions. Regardless of the competency scores, if an item or a competency was significantly different from our peers, it reflects differential educational impact between UHM and peer institutions. Excise caution in interpreting the peer comparison data because the 2020 NSSE used three different peer groups for three different survey modules: the main survey (the 7-institution peer



group was consistent across years), the *Sustainability* module (with 8 comparison institutions, mostly liberal arts colleges), and the *Civic Engagement* module (with 94 institutions in the comparison group).

3. **Comparison between seniors and freshmen.** A substantially higher competency score for seniors than for freshmen indicates the positive impact of the educational experience on students' competency development. A similar competency score between the two groups indicates that both groups had similar learning achievements but there is a lack of growth between the freshman and senior years.

Major Findings

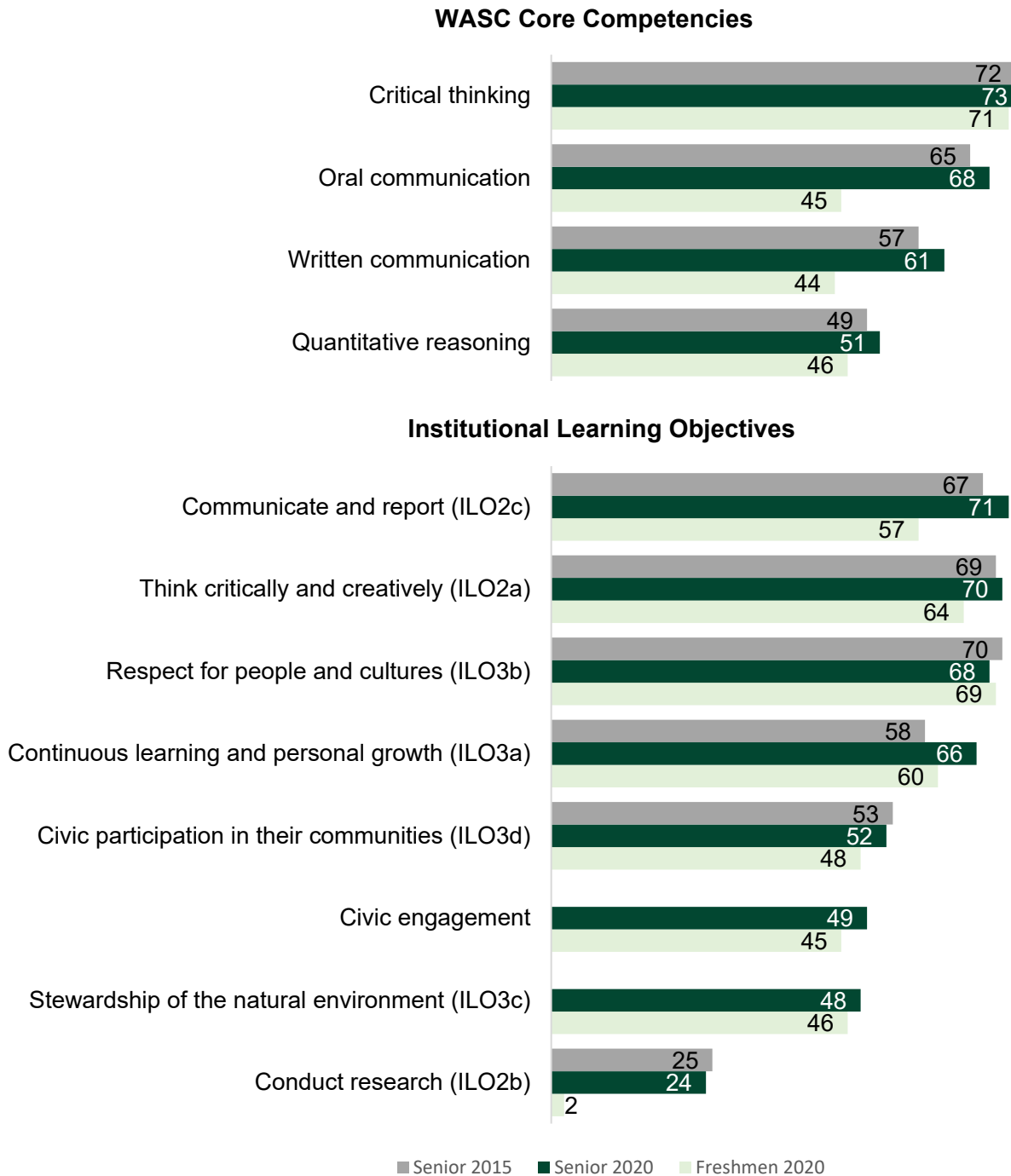
Figure 1. presents the competency scores between 2015 seniors, 2020 seniors, and 2020 freshmen on each competency and how the majority of the items compare with peers. Detailed item outcome scores for seniors and freshmen are in Appendix A.

Table 1 lists the competencies assessed on the 2020 NSSE; the number of items included under each competency; the competency scores for 2015 seniors, 2020 seniors, and 2020 freshmen; the number of respondents for each group; and how half or more of the included items compare with our peer institutions in item mean scores for each group. The results were organized by 2020 seniors' competency scores in descending order.



Figure 1

Competency scores are higher for 2020 Seniors than for 2015 seniors and 2020 freshmen overall



Note: Competency scores range from 0 to 100.



Table 1

Competency Scores and Peer Comparison Results for NSSE 2015 Seniors, 2020 Seniors, and 2020 Freshmen

WASC Competencies and ILOs	Number of Items	Competency Score (Median Percentage of Respondents who Reported Frequent Participation or Substantial Learning)			Number of Total Respondents			Half or Majority of Items Compared with Peers		
		2015 Seniors	2020 Seniors	2020 Freshmen	2015 Seniors	2020 Seniors	2020 Freshmen	2015 Seniors	2020 Seniors	2020 Freshmen
WASC Competencies										
Critical thinking	8	72	73	71	1185-1303	1576-1673	774-845	Lower		
Oral communication	2	65	68	45	1185-1311	1577-1675	773-856	Higher	Higher	
Written communication	4	57	61	44	1154-1192	1579-1605	772-802	Higher	Higher	
Quantitative reasoning	4	49	51	46	1189-1295	1578-1609	770-802	Lower	Lower	Lower
Institutional Learning Objectives										
Communicate and report (ILO 2c)	8	67	71	57	1154-1315	1575-1676	771-857	Higher	Higher	
Think critically and creatively (ILO 2a)	12	69	70	64	1185-1303	1576-1673	770-845	Lower	Lower	Lower
Respect for people and cultures (ILO 3b)	8	70	68	69	1190-1297	1579-1665	774-845	Higher		Higher
Continuous learning and personal growth (ILO 3a)	7	58	66	60	1189-1295	1577-1658	772-845			
Civic participation in their communities (ILO 3d)	6	53	52	48	1185-1298	1575-1668	776-847	Higher	Higher	
Civic engagement (related to ILO 3d)	15	N/A	49	45	N/A	1544-1569	755-769	N/A	Lower	Lower
Stewardship of the natural environment (ILO 3c)	11	N/A	48	46	N/A	1462-1488	694-709	N/A	Lower	Lower
Conduct research (ILO 2b)	8	25	24	2	1236-1236	1576-1576	787-787	Higher		Lower



WASC Core Competencies Results

Among all the WASC competencies:

1. *Critical thinking* had the highest competency scores for both freshmen (71%) and seniors (73%). The difference in competency scores between the 2020 seniors and freshmen was minimal. While the 2015 seniors scored lower than peers on half or more of the items in this competency, the 2020 seniors' scores were comparable with peers for the most part.
2. *Oral communication* and *Written communication* competencies enjoyed the greatest increase in competency scores from freshmen to seniors.
 - a. A median of 68% of the 2020 seniors claimed frequent participation or substantial learning on *Oral communication* (number of items = 2), 51% higher than the 2020 freshmen (at 45%).
 - b. A median of 61% of the 2020 seniors reported frequent participation or substantial learning on *Written communication* (number of items = 4), 39% higher than the 2020 freshmen (at 44%). Furthermore, the 2020 freshmen scored significantly lower than those from peer institutions on half or more *Written communication* items, whereas the 2020 seniors scored significantly higher, indicating a substantial positive impact of the educational experience on students' written communication development.
3. *Quantitative Reasoning* had the lowest competency score. The item mean scores on most items under this competency were significantly lower than those of peers for all three cohorts.

UHM ILOs Results

1. The 2020 seniors had the highest competency scores in *Communicate and report* (ILO 2c) at 71%, *Think critically and creatively* (ILO 2a) at 70%, *Respect for people and cultures* (ILO 3b) at 68%, and *Continuous learning and personal growth* (ILO 3a) at 66%. However, the mean scores on most of the items under *Think critically and creatively* (ILO 2a) were significantly lower than peers.
2. Seniors (24%) had an 11-fold increase over freshmen (2%) in *Conduct research* (ILO 2b). While freshmen's item mean score was significantly lower than peers, seniors caught up, and their mean score was comparable with that of peers.
3. In *Communicate and report* (ILO 2c), *Continuous learning and personal growth* (ILO 3a), and *Think critically and creatively* (ILO 2a), we also observed substantial increases in seniors' competency scores over the freshmen's scores, an increase of 25% (71% vs. 57% in ILO 2c), 10% (66% vs. 60% in ILO 3a), and 9% (70% vs. 64% in ILO 2a), respectively. In addition, seniors' mean item scores under *Communicate and report* (ILO 2c) on five out of eight items were significantly higher than those of peers (See Appendix A).



4. The 2020 NSSE presented somewhat divergent results on the items related to civic learning. While both 2015 and 2020 seniors scored higher on most items related to *Civic participation in their communities* (ILO 3d) than peers, our 2020 respondents, both seniors and freshmen, scored lower than peers on *Civic engagement* items included in the *Civic Engagement* module. The reasons are multi-fold:
 - a. First, the peer comparison groups were different for different NSSE items. The 2020 NSSE main survey's peer comparison group consisted of seven large comprehensive public state universities. (See the list [here](#).) The *Civic participation in their communities* (ILO 3d) items were from the main survey. On the other hand, the comparison group used for the *Civic engagement* items was all participating institutions of the Civic Engagement module in 2020, which consisted of [94 institutions](#) of a variety of sizes, roles, and scopes.
 - b. Second, the nature of the questions is different. In the Civic Engagement module, the items on which our students scored lower were mostly about dealing with disagreements/conflicts [e.g., *Help people resolve their disagreements with each other* (CE 1a) and *Resolve conflicts that involve bias, discrimination, and prejudice* (CE 1b)] and about functioning as a social activist to influence others [e.g., *Raised awareness about campus or local issues* (CE 4e) and *Organized others to work on state, national, or global issues* (CE 4j)].
 - c. The items on which 2020 seniors scored higher than peers in *Civic participation in their communities* (ILO 3d) were about one's own actions: *Connecting learning to societal problems or issues* (2b), *Taking service-learning courses* (12), and *Doing community service or volunteer work* (16e). (See Appendix A.) The UHM seniors may have conducted civic actions more in the areas of participating in civic life through service-learning and volunteering than in activities that exercise social and civic influence.
5. *Stewardship of the natural environment* (ILO 3c) had a relatively low competency score at 48% for 2020 seniors. The difference between 2020 freshmen (46%) and 2020 seniors (48%) was minimal. Both 2020 seniors and 2020 freshmen had lower item mean scores than peers on half or more of the items related to this competency. Even though the comparison groups are mostly liberal arts colleges, this competency is still an area that can use improvement.

Overall Results

The WASC core competencies overlap with the ILOs. For example, *Communication and report* (ILO 3c) includes all the items under *Written communication* and *Oral communication* WASC competencies. This section summarizes the results by competency area, consolidating the findings from the WASC competencies and ILOs. In addition, to further examine the impact of the UHM educational experience, we identified all the items that showed a substantial increase, defined as a 20% or greater increase in 2020 seniors' scores in



comparison with the 2020 freshmen's scores. Table 2 is ordered from the competency with items that showed the greatest increase to the least. Detailed results on outcomes scores and the amount of increase for each item are in Appendix A.

Table 2
NSSE Items Demonstrating Greatest Score Increases of 2020 Seniors over Freshmen

Competency	Item	Score Increase of 2020 Seniors over Freshmen
Conduct research (ILO 2b)	Work with a faculty member on a research project (11e)	1100%
Civic participation in their communities (ILO 3d)	Participate in an internship, co-op, field experience, student teaching, or clinical placement (11a)	571%
	About how many of your courses at this institution have included a community-based project (service-learning)? (12)	44%
	Doing community service or volunteer work (16e)	20%
Continuous learning and personal growth (ILO 3a)	Hold a formal leadership role in a student organization or group (11b)	417%
	Discussed course topics, ideas, or concepts with a faculty member outside of class (3c)	53%
	Talked about career plans with a faculty member (3a)	24%
Respect for people and cultures (ILO 3b)	Participate in a study abroad program (11d)	333%
Communication		
• Communication—Written (WASC, ILO 2c)	11 pages or more writing tasks have been assigned (7c)	189%
	Between 6 and 10 pages writing tasks have been assigned (7b)	79%
	Writing clearly and effectively (18a)	20%
• Communication—Oral (WASC, ILO 2c)	Given a course presentation (1h)	91%
	Speaking clearly and effectively (18b)	27%
• Communication—Interactive (ILO 2c)	Worked with other students on course projects or assignments (1g)	20%
Critical thinking (WASC)	Combined ideas from different courses when completing assignments (2a)	25%
Stewardship of the natural environment (ILO 3c)	Acquiring skills to lead or facilitate group activities (SUS5b)	23%

Major overall findings are:

1. **The competency scores were higher for the 2020 seniors than 2020 freshmen on all but one competency. Competency scores for 2020 and 2015 seniors were similar, with 2020 seniors' scores slightly higher on most competencies.**
2. **The two competency areas that demonstrated the greatest educational impact are in *conducting research and communication*.**
 - a. *Conduct research* (ILO 2b) enjoyed the greatest increase in competency scores from freshmen to seniors. 2020 seniors' competency score (24%) was 12-fold that of the freshmen (2%), presenting an increase of 1100% from freshmen to seniors. There was only one NSSE item used to assess this competency: *Work with a faculty member on a research project* (11e).



- b. *Oral communication* and *Written communication* WASC competencies and *Communicate and report* (ILO 2c) also observed substantial increases in competency scores from freshmen to seniors.
- i. 2020 seniors' *Oral communication* competency score (68%) was 51% higher than that of the 2020 freshmen at 45%. There are two NSSE items under this competency:
 1. *Given a course presentation* (1h)
 2. *Speaking clearly and effectively* (18b)2020 seniors scored substantially higher (more than 20%) than 2020 freshmen on these two items, by 91% and 27%, respectively (See Appendix A.) The item mean scores for 2015 and 2020 seniors were significantly higher than those of peers.
 - ii. 2020 seniors' *Written communication* (WASC) competency score (61%) was 39% higher than freshmen's score (44%). In particular, 2020 seniors scored substantially higher than 2020 freshmen on 3 items:
 1. *11 pages or more writing tasks have been assigned* (7c), by 189%
 2. *Between 6 and 10 pages writing tasks have been assigned* (7b), by 79%
 3. *Writing clearly and effectively* (18a), by 20%Three out of four items under this competency had statistically significantly higher mean scores than those of peers.
 - iii. 2020 seniors' *Communicate and report* (ILO 2c) competency score (71%) was 25% higher than the freshmen's score (57%). Items related to this competency include all items under WASC *Written communication* and *Oral communication* items. In addition to the items that 2020 seniors scored substantially higher on than 2020 freshmen mentioned above, 2020 seniors scored 20% higher on *Worked with other students on course projects or assignments* (1g) than 2020 freshmen. Five out of eight *Communicate and report* (ILO 2c) items had statistically significantly higher mean scores for 2020 seniors than peers.
 - iv. Seniors' competency scores related to communication were consistent across 2015 and 2020 NSSE administrations, with 2020 seniors' scores slightly higher than 2015 seniors.
3. ***Respect for people and cultures*** (ILO 3b) and ***Continuous learning and personal growth*** (ILO 3a) had high competency scores at 68% and 66%, respectively. Under *Respect for people and cultures* (ILO 3b), 2020 seniors scored substantially higher than 2020 freshmen by 333% on *Participate in a study abroad program* (11d). Under *Continuous learning and personal growth* (ILO 3a), 2020 seniors scored substantially higher than 2020 freshmen on three items:
- *Hold a formal leadership role in a student organization or group* (11b), by 417%



- *Discussed course topics, ideas, or concepts with a faculty member outside of class (3c)*, by 53%
 - *Talked about career plans with a faculty member (3a)*, by 24%
4. **Quantitative reasoning** (WASC) and **Think critically and creatively** (ILO 2a) were the areas in which **three cohorts of the students in this study scored lower than peers** on half or more of the items under these competencies. 2020 seniors scored substantially higher than 2020 freshmen only on one item: *Combined ideas from different courses when completing assignments (2a)*, by 25%.
 5. **2020 seniors and freshmen had statistically significantly lower mean scores** than peers on half or more of the items under **Civic engagement** and **Stewardship of the natural environment (ILO 3c)**. However, 2020 seniors still scored substantially higher than 2020 freshmen on one item under ILO 3c: *Acquiring skills to lead or facilitate group activities (SUS 5b)*.
 6. **The results on outcomes related to civic learning were divergent.** While three out of six *Civic participation in their communities* (ILO 3d) items had higher item mean scores than those of peers, eight out of fifteen *Civic engagement* items had statistically significantly lower scores than those of peers. The UHM seniors may have conducted civic actions more in the areas of participating in civic life through service-learning and volunteering than in activities that exercise social and civic influence (e.g., *Organized others to work on state, national, or global issues*). 2020 seniors scored substantially higher than 2020 freshmen on three items under *Civic participation in their communities* (ILO 3d):
 - a. *Participate in an internship, co-op, field experience, student teaching, or clinical placement (11a)*, by 571%
 - b. *About how many of your courses at this institution have included a community-based project (service-learning)? (12)*, by 44%
 - c. *Doing community service or volunteer work (16e)*, by 20%

Conclusion

To conclude, the NSSE results, in general, suggest a positive impact of UHM's educational experience, especially on the following competency areas: conducting research, communication, continuous learning and personal growth, and participating in community. When looking at specific items, 2020 seniors scored much higher on the items related to research (11e), field experience (11a and 11d), participation in the community (12 and 16e), student leadership (11b), interaction with faculty (3a and 3c), communication skills (1g, 1h, 1b, 7c, 18a, and 18b), collaboration in groups and projects (1g and SUS 5b), and combining ideas from multiple courses (2a). These items indicate that UHM students experienced substantial personal and academic growth. UHM students can benefit from increased learning opportunities in the areas of quantitative reasoning, critical thinking, and sustainability. UHM also should consider establishing standards for item outcomes scores and competency scores, thus creating expectations to aid data interpretation and use.



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Appendix A. University of Hawai'i at Mānoa 2020 Freshmen and Seniors' NSSE Results Comparison Related to WASC Core Competencies and Institutional Learning Objectives (ILOs) for Undergraduate Students

Each table contains the NSSE results from the responding seniors and freshmen in the 2020 NSSE administration. Each table includes the percentages of the undergraduate senior and freshman respondents who reported frequent activity participation or substantial learning, mean item scores, items with significant differences when compared to our peer institutions, and the percentage of increase in item scores from freshman to senior respondents. The notation ▼ represents that UHM's results were significantly lower than the results from the peer institutions, and the notation ▲ represents that UHM's results were significantly higher. Only items on the 2020 NSSE were included in this table.

WASC Core Competencies Results

Critical Thinking

Item Description	Responses Included	Freshmen			Seniors			% Increase from Freshmen to Seniors
		%	Mean	vs. Peer	%	Mean	vs. Peer	
Combined ideas from different courses when completing assignments (2a)	Often/ Very Often	55	2.6		69	2.9		25
Applying facts, theories, or methods to practical problems or new situations (4b)	Quite a bit/ Very much	70	2.9	▼	75	3.0		7
Analyzing an idea, experience, or line of reasoning in depth by examining its parts (4c)	Quite a bit/ Very much	72	2.9		74	3.0		3
Evaluating a point of view, decision, or information source (4d)	Quite a bit/ Very much	71	2.9		71	3.0	▲	0
Forming a new idea or understanding from various pieces of information (4e)	Quite a bit/ Very much	69	2.9		71	2.9		3
Identified key information from reading assignments (9a)	Often/ Very Often	75	3.0		77	3.1		3
Thinking critically and analytically (18c)	Quite a bit/ Very much	74	3.0		82	3.2	▼	11
Solving complex real-world problems (18i)	Quite a bit/ Very much	55	2.6		62	2.8		13



Oral Communication

Item Description	Responses Included	Freshmen			Seniors			% Increase from Freshmen to Seniors
		%	Mean	vs. Peer	%	Mean	vs. Peer	
Given a course presentation (1h)	Often/ Very Often	34	2.2		70	2.9	▲	106
Speaking clearly and effectively (18b)	Quite a bit/ Very much	55	2.6		65	2.9	▲	18

Quantitative Reasoning

Item Description	Responses Included	Freshmen			Seniors			% Increase from Freshmen to Seniors
		%	Mean	vs. Peer	%	Mean	vs. Peer	
Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics, etc.) (6a)	Often/ Very Often	49	2.5	▼	56	2.6	▼	14
Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.) (6b)	Often/ Very Often	43	2.4		45	2.4	▼	5
Evaluated what others have concluded from numerical information (6c)	Often/ Very Often	42	2.3	▼	44	2.4	▼	5
Analyzing numerical and statistical information (18d)	Quite a bit/ Very much	58	2.7	▼	67	2.9	▼	16



Written Communication

Item Description	Responses Included	Freshmen			Seniors			% Increase from Freshmen to Seniors
		%	Mean	vs. Peer	%	Mean	vs. Peer	
Up to 5 pages of writing tasks have been assigned (7a)	3-5/6-10/11-15/16-20/ More than 20	75	6.8		82	2.7	▲	9
Between 6 and 10 pages of writing tasks have been assigned (7b)	3-5/6-10/11-15/16-20/ More than 20	28	2.5		50	4.5	▲	79
11 pages or more of writing tasks have been assigned (7c)	3-5/6-10/11-15/16-20/ More than 20	9	1.0		26	8.8	▲	24
Writing clearly and effectively (18a)	Quite a bit/ Very much	59	2.7		71	2.9		20



Institutional Learning Outcomes Results

ILO 2a: Think Critically and Creatively

Item	Responses Included	Freshmen			Seniors			% Increase from Freshmen to Seniors
		%	Mean	vs. Peer	%	Mean	vs. Peer	
Combined ideas from different courses when completing assignments (2a)	Often/ Very Often	55	2.6		69	2.9		25
Applying facts, theories, or methods to practical problems or new situations (4b)	Quite a bit/ Very much	70	2.9	▼	75	3.0		7
Analyzing an idea, experience, or line of reasoning in depth by examining its parts (4c)	Quite a bit/ Very much	72	2.9		74	3.0		3
Evaluating a point of view, decision, or information source (4d)	Quite a bit/ Very much	71	2.9		71	3.0	▲	0
Forming a new idea or understanding from various pieces of information (4e)	Quite a bit/ Very much	69	2.9		71	2.9		3
Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics, etc.) (6a)	Often/ Very Often	49	2.5	▼	56	2.6	▼	14
Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.) (6b)	Often/ Very Often	43	2.4	▼	44	2.4	▼	2
Evaluated what others have concluded from numerical information (6c)	Often/ Very Often	42	2.3	▼	45	2.4	▼	7
Identified key information from reading assignments (9a)	Often/ Very Often	75	3.0		77	3.1		3
Thinking critically and analytically (18c)	Quite a bit/ Very much	74	3.0		82	3.2	▼	11
Analyzing numerical and statistical information (18d)	Quite a bit/ Very much	58	2.7	▼	67	2.9	▼	16
Solving complex real-world problems (18i)	Quite a bit/ Very much	55	2.6		62	2.8		13



ILO 2b: Conduct Research

Item	Responses Included	Freshmen			Seniors			% Increase from Freshmen to Seniors
		%	Mean	vs. Peer	%	Mean	vs. Peer	
Work with a faculty member on a research project (11e)	Done or In Progress	2	0.20	▼	24	0.24		1100

ILO 2c: Communicate and Report

Item	Responses Included	Freshmen			Seniors			% Increase from Freshmen to Seniors
		%	Mean	vs. Peer	%	Mean	vs. Peer	
Worked with other students on course projects or assignments (1g)	Often/ Very Often	59	2.7		71	3.0	▲	20
Given a course presentation (1h)	Often/ Very Often	34	2.2		65	2.9	▲	91
Up to 5 pages of writing tasks have been assigned (7a)	3-5/6-10/11-15/16-20/More than 20	75	6.8		82	8.8	▲	9
Between 6 and 10 pages writing tasks have been assigned (7b)	3-5/6-10/11-15/16-20/More than 20	28	2.5		50	4.5	▲	79
11 pages or more writing tasks have been assigned (7c)	3-5/6-10/11-15/16-20/More than 20	9	1.0		26	2.7	▲	189
Writing clearly and effectively (18a)	Quite a bit/ Very much	59	2.7		71	2.9		20
Speaking clearly and effectively (18b)	Quite a bit/ Very much	55	2.6		70	2.9		27
Working effectively with others (18f)	Quite a bit/ Very much	65	2.8		74	3.0		14



ILO 3a: Continuous Learning and Personal Growth

Item	Responses Included	Freshmen			Seniors			% Increase from Freshmen to Seniors
		%	Mean	vs. Peer	%	Mean	vs. Peer	
Examined the strengths and weaknesses of your own views on a topic or issue (2d)	Often/ Very Often	66	2.8		66	2.8		0
Learned something that changed the way you understand an issue or concept (2f)	Often/ Very Often	72	2.9	▲	75	3.0		4
Connected ideas from your courses to your prior experiences and knowledge (2g)	Often/ Very Often	81	3.1	▲	83	3.2		2
Talked about career plans with a faculty member (3a)	Often/ Very Often	34	2.3	▼	42	2.4		24
Discussed course topics, ideas, or concepts with a faculty member outside of class (3c)	Often/ Very Often	19	1.9	▼	29	2.1		53
Hold a formal leadership role in a student organization or group (11b)	Done or In Progress	6	6%	▼	31	0.31	▼	417
Developing or clarifying a personal code of values and ethics (18g)	Quite a bit/ Very much	60	2.7		66	2.9	▲	10



ILO 3b: Respect for People and Cultures, in Particular Hawaiian Culture

Item	Responses Included	Freshmen			Seniors			% Increase from Freshmen to Seniors
		%	Mean	vs. Peer	%	Mean	vs. Peer	
Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments (2c)	Often/ Very Often	56	2.7	▲	53	2.6	▲	-5
Tried to better understand someone else's views by imagining how an issue looks from his or her perspective (2e)	Often/ Very Often	76	3.0	▲	73	3.0	▲	-4
Discuss with people of a race or ethnicity other than your own (8a)	Often/ Very Often	82	3.3	▲	81	3.3		-1
Discuss with people from an economic background other than your own (8b)	Often/ Very Often	75	3.1		75	3.1		0
Discuss with people with religious beliefs other than your own (8c)	Often/ Very Often	70	3.0	▼	67	3.0		-4
Discuss with people with political views other than your own (8d)	Often/ Very Often	56	2.7	▼	57	2.8	▼	2
Participate in a study abroad program (11d)	Done or In Progress	3	3%		13	0.13		333
Understanding people of other backgrounds (economic, racial/ethnic, political, religious, nationality, etc.) (18h)	Quite a bit/ Very much	68	2.9	▲	69	2.9	▲	1



ILO 3c. Stewardship of the Natural Environment (Data from NSSE 2020 Sustainability Education Consortium)

Item	Responses Included	Freshmen			Seniors			% Increase from Freshmen to Seniors
		%	Mean	vs. Peer	%	Mean	vs. Peer	
Completed an assignment that evaluates the sustainability of some activity (SUS1a)	Often/Very often	40	2.3	▼	41	2.3	▼	2
Made significant contributions in a group project (SUS1b)	Often/Very often	70	2.9	▼	78	3.2	▼	12
Integrated knowledge from multiple academic disciplines in working on a project (SUS1c)	Often/Very often	62	2.7	▼	69	2.9	▼	12
Completed an assignment that evaluates our responsibilities to future generations (SUS1d)	Often/Very often	46	2.4		48	2.5		3
Articulating a vision of a just and sustainable society (SUS5a)	Quite a bit/Very much	44	2.4	▼	45	2.5	▼	1
Acquiring skills to lead or facilitate group activities (SUS5b)	Quite a bit/Very much	43	2.4	▼	53	2.6	▼	23
Understanding the consequences of your choices (SUS5c)	Quite a bit/Very much	65	2.8		60	2.8	▼	-7
Understanding the economic dimensions of sustainability (SUS5d)	Quite a bit/Very much	46	2.4	▼	47	2.5		2
Acquiring the skills to help organizations become more sustainable (SUS5e)	Quite a bit/Very much	40	2.3	▼	44	2.4		9
Understanding issues of social justice (SUS5f)	Quite a bit/Very much	45	2.4	▼	44	2.4	▼	-2
Persevering in achieving long-term goals despite adversity (SUS5g)	Quite a bit/Very much	55	2.6	▼	55	2.6	▼	0



ILO 3d: Civic Participation in Their Communities

Item	Responses Included	Freshmen			Seniors			% Increase from Freshmen to Seniors
		%	Mean	vs. Peer	%	Mean	vs. Peer	
Connected your learning to societal problems or issues (2b)	Often/ Very Often	54	2.6		60	2.8	▲	11
Participate in an internship, co-op, field experience, student teaching, or clinical placement (11a)	Done or In Progress	7	8%		47	0.47		571
About how many of your courses at this institution have included a community-based project (service-learning)? (12)	Most/All	9	1.7	▲	13	1.8	▲	44
Participating in co-curricular activities (organizations, campus publications, student government, fraternity or sorority, intercollegiate or intramural sports, etc.) (16b)	1-5 hrs/ .../26-30 hrs/ More than 30 hours	56	4.3	▼	54	4.8		0
Doing community service or volunteer work (16e)	1-5 hrs/ .../26-30 hrs/ More than 30 hours	41	2.5		49	3.5	▲	20
Being an informed and active citizen (18j)	Quite a bit/ Very much	55	2.6		54	2.6		-2



Civic Engagement Skills from NSSE 2020 Civic Engagement Module

Item	Responses Included	Freshmen			Seniors			% Increase from Freshmen to Seniors
		%	Mean	vs. Peer	%	Mean	vs. Peer	
Help people resolve their disagreements with each other (CE 1a)	4/5(Excellent)	56	3.6	▼	60	3.7	▼	7
Resolve conflicts that involve bias, discrimination, and prejudice (CE 1b)	4/5 (Excellent)	45	3.4	▼	49	3.5	▼	9
Lead a group in which people from different backgrounds feel welcomed and included (CE 1c)	4/5 (Excellent)	57	3.6		66	3.8	▼	16
Participate in a constructive dialogue with someone who disagrees with you (CE 1d)	4/5 (Excellent)	54	3.6	▼	58	3.7	▼	7
Contribute to the well-being of your community (CE 1e)	4/5 (Excellent)	57	3.6	▼	66	3.8	▼	16
Informed yourself about campus or local issues (CE 4a)	Often/Very often	55	2.6	▲	50	2.6		-9
Informed yourself about state, national, or global issues (CE 4b)	Often/Very often	60	2.7		64	2.9	▼	7
Discussed campus or local issues with others (CE 4c)	Often/Very often	45	2.5		45	2.5		0
Discussed state, national, or global issues with others (CE 4d)	Often/Very often	51	2.6		53	2.7	▼	4
Raised awareness about campus or local issues (CE 4e)	Often/Very often	22	1.9	▼	26	2.0		18
Raised awareness about state, national, or global issues (CE 4f)	Often/Very often	25	2.0	▼	29	2.1	▼	16
Asked others to address campus or local issues (CE 4g)	Often/Very often	19	1.7	▼	19	1.8		0
Asked others to address state, national, or global issues (CE 4h)	Often/Very often	20	1.7	▼	21	1.8	▼	5
Organized others to work on campus or local issues (CE 4i)	Often/Very often	14	1.5	▼	14	1.6		0
Organized others to work on state, national, or global issues (CE 4j)	Often/Very often	14	1.5	▼	14	1.6		0



Appendix B. University of Hawai'i at Mānoa 2015 to 2020 NSSE Results Comparison Related to the WASC Core Competencies and Institutional Learning Objectives (ILOs) for Undergraduate Students

Each table contains the NSSE results from the responding seniors in the 2015 and 2020 NSSE administrations. Each table includes the percentages of the undergraduate senior respondents who reported frequent activity participation or substantial learning, mean item scores, and items with significant differences when compared to our peer institutions. The notation ▼ represents that UHM's results were significantly lower than the results from the peer institutions and the notation ▲ represents that UHM's results were significantly higher. There were no information literacy-related NSSE items in the 2020 administration, thus the results were not available for *Information literacy* (WASC) from 2020 NSSE results. The 2015 NSSE and 2020 NSSE were slightly different. Only items on the 2020 NSSE were included in this study.

WASC Core Competencies Results

Critical Thinking

Item Description	Responses Included	2015				2020			
		Item #	%	Mean	vs. Peer	Item #	%	Mean	vs. Peer
Combined ideas from different courses when completing assignments	Often/ Very Often	2a	69	3.0	▼	2a	69	2.9	
Applying facts, theories, or methods to practical problems or new situations	Quite a bit/ Very much	4b	75	3.1	▼	4b	75	3	
Analyzing an idea, experience, or line of reasoning in depth by examining its parts	Quite a bit/ Very much	4c	75	3.1	▼	4c	74	3	
Evaluating a point of view, decision, or information source	Quite a bit/ Very much	4d	69	2.9		4d	71	3	▲
Forming a new idea or understanding from various pieces of information	Quite a bit/ Very much	4e	69	2.9		4e	71	2.9	
Identified key information from reading assignments	Often/ Very Often	9a	81	3.2		9a	77	3.1	
Thinking critically and analytically	Quite a bit/ Very much	17c	79	3.1	▼	18c	82	3.2	▼
Solving complex real-world problems	Quite a bit/ Very much	17i	58	2.7	▼	18i	62	2.8	



Oral Communication

Item Description	Responses Included	2015				2020			
		Item #	%	Mean	vs. Peer	Item #	%	Mean	vs. Peer
Given a course presentation	Often/ Very Often	1i	62	2.8	▲	1h	70	2.9	▲
Speaking clearly and effectively	Quite a bit/ Very much	17b	67	2.9		18b	65	2.9	▲

Quantitative Reasoning

Item Description	Responses Included	2015				2020			
		Item #	%	Mean	vs. Peer	Item #	%	Mean	vs. Peer
Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics, etc.)	Often/ Very Often	6a	53	2.6	▼	6a	56	2.6	▼
Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.)	Often/ Very Often	6b	45	2.4		6b	45	2.4	▼
Evaluated what others have concluded from numerical information	Often/ Very Often	6c	45	2.5		6c	44	2.4	▼
Analyzing numerical and statistical information	Quite a bit/ Very much	17d	59	2.7	▼	18d	67	2.9	▼



Written Communication

Item Description	Responses Included	2015				2020			
		Item #	%	Mean	vs. Peer	Item #	%	Mean	vs. Peer
Up to 5 pages of writing tasks have been assigned	3-5/6-10/11-15/16-20/More than 20	7a	81	8.3	▲	7a	82	2.7	▲
Between 6 and 10 pages of writing tasks have been assigned	3-5/6-10/11-15/16-20/More than 20	7b	46	3.9	▲	7b	50	4.5	▲
11 pages or more of writing tasks have been assigned	3-5/6-10/11-15/16-20/More than 20	7c	25	2.7	▲	7c	26	8.8	▲
Writing clearly and effectively	Quite a bit/ Very much	17a	68	2.9		18a	71	2.9	



Institutional Learning Outcomes Results

ILO 2a: Think Critically and Creatively

Item	Responses Included	2015				2020			
		Item #	%	Mean	vs. Peer	Item #	%	Mean	vs. Peer
Combined ideas from different courses when completing assignments	Often/ Very Often	2a	69	3.0	▼	2a	69	2.9	
Applying facts, theories, or methods to practical problems or new situations	Quite a bit/ Very much	4b	75	3.1	▼	4b	75	3	
Analyzing an idea, experience, or line of reasoning in depth by examining its parts	Quite a bit/ Very much	4c	75	3.1	▼	4c	74	3	
Evaluating a point of view, decision, or information source	Quite a bit/ Very much	4d	69	2.9		4d	71	3	▲
Forming a new idea or understanding from various pieces of information	Quite a bit/ Very much	4e	69	2.9		4e	71	2.9	
Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics, etc.)	Often/ Very Often	6a	53	2.6	▼	6a	56	2.6	▼
Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.)	Often/ Very Often	6b	45	2.4		6b	44	2.4	▼
Evaluated what others have concluded from numerical information	Often/ Very Often	6c	45	2.5		6c	45	2.4	▼
Identified key information from reading assignments	Often/ Very Often	9a	81	3.2		9a	77	3.1	
Thinking critically and analytically	Quite a bit/ Very much	17c	79	3.1	▼	18c	82	3.2	▼
Analyzing numerical and statistical information	Quite a bit/ Very much	17d	58	2.7	▼	18d	67	2.9	▼



Solving complex real-world problems	Quite a bit/ Very much	17i	58	2.7	▼	18i	62	2.8	
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ILO 2b: Conduct Research

Item	Responses Included	2015				2020			
		Item #	%	Mean	vs. Peer	Item #	%	Mean	vs. Peer
Work with a faculty member on a research project	Done or In Progress	11e	25	25%	▲	11e	24	0.24	

ILO 2c: Communicate and Report

Item	Responses Included	2015				2020			
		Item #	%	Mean	vs. Peer	Item #	%	Mean	vs. Peer
Worked with other students on course projects or assignments	Often/ Very Often	1h	67	3.0	▲	1g	71	3	▲
Given a course presentation	Often/ Very Often	1i	62	2.8	▲	1h	65	2.9	▲
Up to 5 pages of writing tasks have been assigned	3-5/6-10/11-15/16-20/More than 20	7a	81	8.3	▲	7a	82	8.8	▲
Between 6 and 10 pages writing tasks have been assigned	3-5/6-10/11-15/16-20/More than 20	7b	46	3.9	▲	7b	50	4.5	▲
11 pages or more writing tasks have been assigned	3-5/6-10/11-15/16-20/More than 20	7c	25	2.7	▲	7c	26	2.7	▲
Writing clearly and effectively	Quite a bit/ Very much	17a	68	2.9		18a	71	2.9	
Speaking clearly and effectively	Quite a bit/ Very much	17b	67	2.9		18b	70	2.9	
Working effectively with others	Quite a bit/ Very much	17f	69	2.9		18f	74	3	



ILO 3a: Continuous Learning and Personal Growth

Item	Responses Included	2015				2020			
		Item #	%	Mean	vs. Peer	Item #	%	Mean	vs. Peer
Examined the strengths and weaknesses of your own views on a topic or issue	Often/ Very Often	2d	65	2.8		2d	66	2.8	
Learned something that changed the way you understand an issue or concept	Often/ Very Often	2f	71	3.0		2f	75	3	
Connected ideas from your courses to your prior experiences and knowledge	Often/ Very Often	2g	81	3.2		2g	83	3.2	
Talked about career plans with a faculty member	Often/ Very Often	3a	38	2.3		3a	42	2.4	
Discussed course topics, ideas, or concepts with a faculty member outside of class	Often/ Very Often	3c	30	2.1		3c	29	2.1	
Hold a formal leadership role in a student organization or group	Done or In Progress	11b	33	0.32		11b	31	0.31	▼
Developing or clarifying a personal code of values and ethics	Quite a bit/ Very much	17g	58	2.7		18g	66	2.9	▲



ILO 3b: Respect for People and Cultures, in Particular Hawaiian Culture

Item	Responses Included	2015				2020			
		Item #	%	Mean	vs. Peer	Item #	%	Mean	vs. Peer
Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments	Often/ Very Often	2c	56	2.7	▲	2c	53	2.6	▲
Tried to better understand someone else's views by imagining how an issue looks from his or her perspective	Often/ Very Often	2e	71	3.0		2e	73	3	▲
Discuss with people of a race or ethnicity other than your own	Often/ Very Often	8a	83	3.4		8a	81	3.3	
Discuss with people from an economic background other than your own	Often/ Very Often	8b	79	3.2	▲	8b	75	3.1	
Discuss with people with religious beliefs other than your own	Often/ Very Often	8c	73	3.1		8c	67	3	
Discuss with people with political views other than your own	Often/ Very Often	8d	68	3.0	▼	8d	57	2.8	▼
Participate in a study abroad program	Done or In Progress	11d	15	0.14	▲	11d	13	0.13	
Understanding people of other backgrounds (economic, racial/ethnic, political, religious, nationality, etc.)	Quite a bit/ Very much	17h	64	2.9		18h	69	2.9	▲



ILO 3d: Civic Participation in Their Communities

Item	Responses Included	2015				2020			
		Item #	%	Mean	vs. Peer	Item #	%	Mean	vs. Peer
Connected your learning to societal problems or issues	Often/ Very Often	2b	65	2.9	▼	2b	60	2.8	▲
Participate in an internship, co-op, field experience, student teaching, or clinical placement	Done or In Progress	11a	52	0.50		11a	47	0.47	
About how many of your courses at this institution have included a community-based project (service-learning)?	Most/All	12	11	1.8	▲	12	13	1.8	▲
Participating in co-curricular activities	1-5 hrs/.../26-30 hrs/More than 30 hours	15b	53	4.6	▲	16b	56	4.8	
Doing community service or volunteer work	1-5 hrs/.../26-30 hrs/More than 30 hours	15e	54	3.9	▲	16e	49	3.5	▲
Being an informed and active citizen	Quite a bit/ Very much	17j	51	2.5	▼	18j	54	2.6	