General Education Assessment Report – CY 2021 with Appendices

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General Education Summary Report--CY 2021

Most want March to look and feel like May. As the last week of March 2022 opened, however, March looked more like November, what with the heavy dusting of snow, and felt more like a January day when bright sunshine belies stinging wind and numbing cold. The first weekend of April brought snow, no fooling. Still, we look forward, our sights set on spring, commencement, summer.

Committed to general education and the assessment of student learning, May also offers us a time to look back, to reflect on a calendar year fast receding from our minds, dimming even, what with the rush of activity that characterizes the spring term.

Each year you are invited to include advice to others as part of your general education assessment report. Most of you take that invitation to heart. Each year to date the advice can be best grouped under the headings of communication and process, teaching and teaching supplements, and a collection of other comments that frequently center on lack: lack of resources, lack of time, lack of motivation on the part of students, lack of student preparation both prior to arriving at university and over the course of the semester. In recent years, the COVID-19 pandemic has featured in various sections of a number of reports, including in the advice section.

Unlike the deceiving sunlight of a late March morning taking us back to the hard cold of an Oswego winter, let us illuminate that which should warm us, should help us take heart. It too comes in the form of advice, or rather, and more specifically what the Middle States review team called "collegial advice" offered during the final session of its visit. They used the term when they saw or heard something that they thought our institution can build on. Regarding general education, the Middle States reviewers remarked that we could do a better job on the General Education web site of providing students with easily available important information concerning general education category student learning outcomes.

That was it. No "you must attend to" statement(s) regarding the assessment of student learning, not a word about our assessment processes and practices, not so much as some collegial advice about the work done when it comes to general education and the assessment of student learning and the refinement of teaching strategies in light of that assessment.

We should not be surprised, really, for a look back through a baker's half-dozen of General Education Assessment summary reports makes clear that your time and attention has resulted in the growth and maturation of assessment processes at every level: individual courses and instructors, departments and programs, and the Assessment Advisory Committee and General Education Council.

The Middle States reviewers asked to see syllabi on the second morning of their virtual visit-- including a couple from general education courses. This posed no problem because departments and programs collect syllabi and thus all that needed be done was to ask for them.

That is to say, a repository of important information was near to hand when it was needed. Looking back over past General Education summary reports, one sees local collegial advice, if you will, reminding departments and programs to prepare for succession--be it at the chair/director level or assessment coordinator role--by developing and maintaining a clear articulation of assessment processes and procedures so that new leadership has a base from which to work. Looking back over what has been done helps departments and programs and the institution move ahead, after all.

We've a mature practice for the assessment of student learning in our general education offerings and in our infused categories and competencies. Our processes and procedures have grown and refined. To help ensure that general education assessment of student learning does not begin to slow and bend with the weight of time, it bears remembering that you and your colleagues are creating an archive of and for teaching and the assessment of student learning, an archive that is first and foremost for you, your colleagues, and ultimately, although they'll likely never see it, for your students. Just as you have created department and program documents detailing your assessment processes so that you can complete this important work--who does what and when; where does what get done go and when, and the like--so too should you conceive of general education assessment plan updates and reports as benefiting you and your students.

To be sure, archives and authority are linked; the latter determines what goes into and becomes of the former. Please continue to bear that in mind as you craft plan updates and complete assessment reports for it is you with the authority, if you will, to include in them what best benefits you and your students. You and your department/program colleagues are the primary audience. Archived, which is to say in departmental/program archives, your general education assessment plan updates and general education assessment reports serve as touchstones as you look forward, just as we look forward now to mid-May and the promise of warm sunshine and breeze, commencement and the ceremonial close of the academic year, and our annual general education assessment retreat. It will be Monday morning, 16 May, at Rice Creek Field Station--details to follow.

Appendix 1—Exemplary Reports

Here we include examples of reports from Communication, History, and Linguistics.

General Education Assessment Report – Computer and Information Literacy

Course:**COM 403: Communication Research**   # of sections: **One (1)**   Calendar Year: ____**2021**

General Education Category	Learning Outcome Students will demonstrate the ability to	Information			Results[1]							
		Semester(s) of data collection	Students Assessed		Exceeding Standards		Meeting Standards		Approaching Standards		Not Meeting Standards	
			#	%[2]	#	%	#	%	#	%	#	%
Computer and Information Literacy	Perform the basic operations of personal computer use	Spring 2021	25	100%	0	0%	20	80%	4	16%	1	4%
	Understand and use basic research techniques	Spring 2021	25	100%	0	0%	21	84%	2	8%	2	8%
	Locate, evaluate and synthesize information from a variety of sources	Spring 2021	25	100%	0	0%	20	80%	5	20%	0	0%

[1] Each student should be counted only once. If assessment has taken place across multiple sections, data should be aggregated for the purpose of this report.
[2] Number should represent percentage of the total students enrolled in course.

Assessment tool and measure Did you use the assessment tool and measure identified in your assessment plan update? **X** Yes _____ No If No, please attach to this form a document indicating what you used instead and the rationale for doing so.

Briefly describe your **method of analysis**

The assessment conducted followed the updated assessment plan, which outlined designated multiple-choice questions used to evaluate students' individual ability to perform basic operations of personal computer use, understand and use basic research techniques, and locate/evaluate/synthetize information from a variety of sources. The test questions aimed at evaluating students' knowledge focused on core research terminology, APA citations and formatting, conducting online literature searches, and presenting information. Additionally, final research papers were used to assess outcomes. Papers were prepared using word processing software to illustrate basic computing skills and conformed to APA formatting guidelines. The content of the paper presented a literature review of existing research sources, proposed a research question, and reported on and analyzed original data collected to answer the question. Students received feedback on drafts prior to the submission of their final paper. Students had the choice to work in groups for their final research papers. A total of *N* = 7 final papers were assessed.

Analysis of results Please be sure to address each learning outcome and both strengths and weaknesses revealed by the assessment, if any.

Findings generated from test questions reveal that a majority of the students enrolled in COM 403 in the Spring 2021 semester met standards established for computer and information literacy because they answered multiple choice and open-ended questions correctly about *personal computer use*, *understanding research techniques* and the *location, evaluation, and synthesis of information* from a variety of sources. The additional assessment of the presentation and content of final research papers adds to the strength of this assessment because the preparation of these papers permitted students to showcase their skill at using *personal computers to prepare documents* and the content of these papers had students *locate, evaluate, and synthesize information* and not just understand but *use basic research,* complementing the answers provided in test questions with exemplar work. The AACU rubric aided in the assessment process to establish appropriate benchmarks and facilitate the evaluation of the papers.

Individual performance on test questions had a wide range of variance (54% - 90%). Assessment of final research papers revealed that 5 of the 7 papers met expectations, and 2 papers only approached expectations. These papers may have approached standards instead of failing to meet standards because of the review and revision opportunities presented to students. Additionally, all group authors received the same assessment score on their group papers for the purpose of reporting aggregate assessment data. Because assessment is designed to evaluate performance of a group along categorical benchmarks, this weakness simply means that we lack refinement on specific individual's abilities and skills in these aggregate data.

General Education Assessment Report – Computer and Information Literacy

Action to be taken: please indicate the connection between the assessment findings and the proposed action(s); if no action is to be taken, please indicate why you think none is necessary.

There are no specific actions to be taken. Assessment findings suggest the content covered in COM 403 directly rates to students' knowledge and performance relating to computer and information literacy. The course content in COM 403 introduces students to the diverse methodologies used in the field of communication and related social scientific fields and has students engage with techniques for conducting original basic research. Students also locate, evaluate and synthesize information from various sources. Additionally, students prepare assignments which utilize basic personal computer knowledge. Therefore, continuing and maintaining current actions which permits students to demonstrate skills and knowledge relating to computer and information literacy through a variety of assignments with multiple choice questions, open-ended questions. Students should still be given choice on working alone or independently on final research papers learning information and demonstrating skills in computer and information literacy can be strengthened through peer learning and feedback.

What has been learned that could be helpful to others as they conduct assessment of General Education:

It might be helpful to address and explain two trends which might explain our findings around assessing student ability to perform basic operations of personal computer use. First, one assessment question on the test asked students about how they insert headings into documents while conforming to APA formatting standards for heading content. Since the last assessment (2018), the American Psychological Association updated their formatting and citation guidelines in the 7th edition. One specific change made in the 2019 version is that student papers no longer require a running head. Students were able to demonstrate competency with inserting page numbers into headings because that formatting guideline has stayed the same. Second, the questions assessing personal computing knowledge on tests were worded using Microsoft Word terminology. However, since the last assessment (2018), many students use Google Docs as their preferred word processing software instead of Microsoft Word. Combined, these two trends may account for why no students exceeded expectations in the personal computer use assessment category.

Course: _HIS 202: United State History to 1865____   # of sections:__3_____   Calendar Year: _2021_____

General Education Category	Learning Outcome	Information				Results[1]							
	Students will demonstrate	Semester(s) of data collection	Students Assessed			Exceeding Standards		Meeting Standards		Approaching Standards		Not Meeting Standards	
			#	%[2]		#	%	#	%	#	%	#	%
American History	Knowledge of a basic narrative of American history: political, economic, social, and cultural, including knowledge of unity and diversity in American society	Spring &Fall	209	100% No		27	13	73	35	80	38	29	14
	Knowledge of common institutions in American society and how they have affected different groups	Spring & Fall	209	100%		21	10	65	31	83	40	40	19
	Understanding of America's evolving relationship with rest of world	Spring & Fall	209	100%		29	14	78	37	85	41	17	8

[1] Each student should be counted only once. If assessment has taken place across multiple sections, data should be aggregated for the purpose of this report.
[2] Number should represent percentage of the total students enrolled in course.

Assessment tool and measure Did you use the assessment tool and measure identified in your assessment plan update? __X___ Yes _____ No If No, please attach to this form a document indicating what you used instead and the rationale for doing so.

Briefly describe your **method of analysis**

Our method of analysis followed our plan in that we gave the students a prompt that attempted to touch upon all the learning outcomes at the beginning of the semester and followed up with the same prompt at the end of the semester. We then evaluated these answers to determine what, if any, improvement took place. Normally we evaluate a percentage of these responses but this round we examined all of them. It is important to note this does not include all enrolled students as some students did not take hand in their responses at the beginning of the semester so we did not include their responses, if they took them, from the end of the semester.

Analysis of results Please be sure to address each learning outcome and both strengths and weaknesses revealed by the assessment, if any.

Interpreting assessment results is challenging under the best of circumstances and 2021 was far from ideal. These sections were taught in two different modalities--online and face-to-face. HIS 202 was not designed as an online course so we had to teach it "on the fly" without the usual training and preparation that goes into online courses. Obviously this had some kind of impact on these results and what happened in the course but it is very difficult to determine the nature of the effect. Upon discussing these results and our impressions of the courses we agreed that students were more overwhelmed, disengaged, and at sea than any time before the pandemic. The pandemic's impact was notable in terms of how much they read, discussed, and grappled with the major themes of early American History.

Some general trends do seem to appear in these numbers. The best prepared, most interested students performed well. This is no surprise. What seems unique in this round of assessment is that fewer of the more marginal students progressed from the lower categories to "meeting standards" by the end of the course. Once again, this could be a product of the modality, the burden of the pandemic, or perhaps the beginning of a trend. While a significant percentage of students could provide some information about institutions like slavery, for example, they had more difficulty making connections between how the institution varied from region to region and fit within the broader American economy. Students performed slightly better in articulating the United States' relationship global states and economic trends but, perhaps ironically, this component is not in the revised general education requirements as SUNY has embraced the inward turn reflected in our national politics.

Action to be taken: please indicate the connection between the assessment findings and the proposed action(s); if no action is to be taken, please indicate why you think none is necessary.

Obviously our prompts will change dramatically in the next round to reflect the new general education requirement language in history as well as the diversity requirement that HIS 202 will need to meet. We will need to discuss possibly using an entirely different method of assessment and move away from a single all-encompassing prompt. This may be difficult to implement across the board however as different instructors prefer an array of assessment tools.

What has been learned that could be helpful to others as they conduct assessment of General Education:

This has been touched upon already but perhaps the single most important lesson learned from this round of assessment has been the significant and often devastating impact the pandemic has had upon student learning. This is especially true for our most disadvantaged students. Before the pandemic many of these students had great difficulty overcoming their lack of academic preparation and tough economic position. The pandemic exacerbated this situation.

Course: <u>LIN 400: Investigating a Language</u>   # of sections: <u>1 section: Section 800</u>   Calendar Year: <u>2021</u>

General Education Category	Learning Outcome Students will demonstrate the ability to	Information				Results[1]							
		Semester(s) of data collection	Students Assessed		Exceeding Standards		Meeting Standards		Approaching Standards		Not Meeting Standards	
			#	%[2]	#	%	#	%	#	%	#	%
Computer and Information Literacy	Perform the basic operations of personal computer use	Spring/2021	7	100	3	42.8	2	28.6	2	28.6	0	00.0
	Understand and use basic research techniques	Spring/2021	7	100	4	57.1	2	28.6	1	14.3	0	00.0
	Locate, evaluate and synthesize information from a variety of sources	Spring/2021	7	100	3	42.9	4	57.1	0	00.0	0	00.0

[1] Each student should be counted only once. If assessment has taken place across multiple sections, data should be aggregated for the purpose of this report.
[2] Number should represent percentage of the total students enrolled in course.

Assessment tool and measure Did you use the assessment tool and measure identified in your assessment plan update? _____✔___ Yes _____ No If No, please attach to this form a document indicating what you used instead and the rationale for doing so.

Briefly describe your **method of analysis**

We used the culminating research paper on Kiowa for LIN 400 to evaluate computer and information literacy. This evaluation is based on a rubric, which breaks down the three learning outcomes (LO) each into four separate criteria. For instance, with regard to LO1 (Perform the basic operations of personal computer use), we evaluate the paper using four criteria. Paper appropriately and consistently a) uses special character symbols, italics, underlining and other font-related devices to identify and highlight language data, b) uses the table function or other such devices to sort, organize and present linguistic data, c) use lines, graphs, margins, etc. to highlight the patterns in linguistic data, and d) effectively uses devices such indentation, spacing, margins, etc. to highlight the organization and content of paper. For each criterion, students' papers are assessed on a scale of 5 to 1, with 5 equal to "strongly agree" and 1 equal to "strongly disagree". Each of the three learning outcomes is worth a maximum of 20 points. Those who exceed standards receive a score at or above 90%; those who meet standards receive a score between 75% and 89%; those who approach standards receive a score between 60% and 74%; and finally those who do not meet the standard score at or below 59%. This qualitative measure is the measure reported in our assessment plan. The criteria we created reflect the expectations and requirements for students in the Linguistics Program.

Analysis of results Please be sure to address each learning outcome and both strengths and weaknesses revealed by the assessment, if any.

a. Overall, results suggest that students are strong with respect to all three learning outcomes, with the class percentages at 85.0% for LO1, 85.7% for LO2, and 87.9% for LO3. With respect to LO1, 42.9 % of students exceed standards; 28.6% of students meet standards; and 28.6% students approach standards. With respect to LO2, 57.1 % of students exceed standards; 28.6% of students meet standards; and 14.3% students approach standards. With respect to LO3, 42.9% of students exceed standards; 57.1% of students meet standards; no student or 0% students approaches standards. No student or 0% of students fails to meet the standard for all three learning outcomes. This result is not unexpected, considering that students who take this class are mostly seniors or second semester juniors and have had extensive use of computers to handle linguistic data and various academic tasks.

b. Examination of LO1 shows that students are weaker in two of four items: a) use font-related devices such as special character symbols, italics to identify and highlight language data and b) use tools such as spacing, and margins to highlight the organization of the paper. Our analysis suggests that some students are a bit too overwhelmed to pay close attention to mechanical aspects of writing, not because they do not know. Examination of LO2 reveals that students are weaker in three of four items: a) understanding the need to sort and organize linguistic data, b) identifying patterns and generalizations, and c) drawing and stating inferences from the data. Key problems with these areas include: a) data are listed rather than sorted, b) interpretations of data are not complete, and c) data picked to support interpretations and inferences are not always appropriate. With respect to LO3, students are slightly weaker with supporting findings by using a variety of sources. These results suggest that at least some students struggle with several key aspects of research.

Action to be taken: please indicate the connection between the assessment finds and the proposed action(s); if no action is to be taken, please indicate why you think none is necessary.

a. These findings demonstrate that more emphases need to be placed on LO2 and selected aspects of LO3, that is, a) data sorting and organization, b) pattern identification and statement of generalizations, c) inference making and statement of inferences, and d) the support of analyses, findings and interpretations with multiple sources of data. As we indicate above, key issues in these areas include the failure to organize the data, the failure to analyze the data fully and the failure to support inferences and analyses with appropriate evidence. Note that all four of these areas are critical areas of research. Even though it is easy to leave some data unanalyzed or to support interpretations and findings with inappropriate data, these findings suggest that these aspects of research need to be strengthened. Clearly, developing these skills cannot just take place in LIN 400. It needs to start earlier, in particular, in LIN 200 and LIN 201. Information related to this finding is being shared with the relevant professors in charge of these courses so that they can be targeted when these courses are offered in Fall, 2021.

b. In the 2018 assessment of computer and information literacy, the key area of weakness we identified lied with LO3, that is, locate, evaluate and synthesize information from a variety of sources. Following that assessment, we intensified instruction and assessment of LO3. The findings of this assessment show that students have made some progress with respect to three aspects of LO3. This assessment also reveals that some students continue to struggle with evaluating and synthesizing information from more than one source. This finding suggests that our assessment needs to be more intentional in pushing students to examine, assess and incorporate information from a variety of sources so that they have repeated practice with these research skills in core LIN courses. To achieve this goal, we intend to make evaluating and synthesizing multiple sources of information an explicit goal of key assessments. For example, rather than just giving students data to analyze, we plan to ask students to compare their analysis with an alternative analysis and evaluate the two analyses. This type of assessment forces students not just to come up with an analysis, but also to argue for their analysis, their findings and interpretations.

What has been learned that could be helpful to others as they conduct assessment of General Education:

We have just highlighted areas that some linguistics students find challenging: a) understanding the need to sort and organize linguistic data; b) identifying the patterns and generalizations, c) drawing and stating the inferences from the data, and d) using multiple data sources to support the analyses, findings and interpretations. We wonder if these challenges are limited to linguistics majors and what actions are taken by other programs to address these challenges. If these challenges are not limited to linguistics majors (as we suspect they are not), university-wide efforts can be made. For example, if we find sorting and organizing data is a challenge with students in multiple disciplines, we might start addressing this issue as early as GE courses. While we do not expect these skills to be fully developed in GE courses as some of these skills are discipline-specific, we believe that concerted, university-wide efforts, sustained by department and program-specific efforts, will have a stronger and more long-lasting impact on student learning and the development of these skills.

Appendix 2—Insights

Here you will find comments concerning communication and process, teaching and teaching supplements, and other advice, comments, and suggestions.

<u>Communication and Process</u>

--Because our class sizes are always modest for our Research Methods (conceived as a stepping stone to our Major Capstone class), we have found it necessary to really use all of the class to assess any of our learning outcomes and not a sample. I also think that when dealing with major projects, drafting and building in drafting help in the class probably has the most opportunity for us to improve our own results in this class.

--Because our class sizes are always modest for our CAPSTONE (at least for the past couple of years, we've also had 23 person sections), we have found it necessary to really use all of the class to assess any of our learning outcomes and not a sample. I think trying out online group projects in upper division settings should be a key part of CIL assessment in future.

--Our Google form with questions to faculty about changes in their courses and their own observations has been really helpful in analyzing data. They know their students well given that they spend 6 hours in class each week and are able to give insights into many aspects of student lives that might otherwise be invisible.

--We are particularly pleased with the improvement we achieved in LO3 since the last assessment 3 years ago. Our strategy of bringing the results of the previous assessment to departmental faculty, discussing these results, and sharing strategies for developing the relevant student skills were followed by a dramatic improvement in student performance.

--Although the computer and information literacy learning outcomes tend to transcend fields of study, it may be more meaningful to do this sort of assessment if you can find compelling ways to flavor assessment of the the three learning outcomes with ideas, methodologies, and technological skills that are associated with your particular field of study.

--It continues to take time to combine the assessment data, though some of the tools created from previous cycles assist with this. I still need to get all the data in one spreadsheet, which makes the analysis more efficient. I was able to repurpose the table format that I developed for the previous assessment cycles with this report. Due to a lack of fidelity between Google Sheets and Documents, it was easier to place screenshots of tables than editable ones. I repeatedly used countif, sumif, and vlookup functions to aid in the categorizing and recoding of the data.

--While not new, our department continues to benefit from aligning general education goals with program goals to streamline the assessment process. Using a google form to collect data and faculty insight is also very helpful in managing the large amount of information needed to conduct assessment.

--Use of a google form to collect data and assignment sheets from each course and section makes it easier to maintain consistency and spot areas for improvement.

--Regarding the assessment process itself, Creative Writing has found it helpful for assessments to be completed concurrently with or just following the grading period, when trends may be qualitatively observed via instructor comments submitted while classroom dynamics are fresh in instructors' minds. Regarding class dynamics, one assessor observed: "This semester, I broke my students down into small workshopping groups (five students in each) for the first time (instead of workshopping as a large group) because I thought it would make workshopping online more effective; and I got a lot of positive feedback from them when I asked them to write about the experience."

--Creative Writing instructors report that performing an embedded assessment (completed concurrently with, or just after, final grading) grows easier with repetition, increasing its worth among faculty as they are able to spend less time navigating the process and more time analyzing and discussing the results. Hence, we feel that results are maximized by continuity of process.

--If I had mentioned to the students that I would conduct this evaluation at the beginning of the semester, they may have focused on learning on the points of assessment . . .

--We believe that embedded assessment may be helpful to many departments. We found it relatively simple to make accurate, even sensitive determinations about our own students' work, which we know intimately by the end of the semester in ENG 102. We also found that the project led to both healthy, inclusive discussions of grading norms and insightful, reflective conversations about student writing (which in our opinion is the most important reason to do assessment!). The process also did not require that the members of a small departmental reading committee be tasked with a herculean administrative project. As we have suggested, however, we suspect that the results of this study are out of line with previous assessments. The next time we do this, we plan to follow the same process, but to collect data anonymously, through a Google form, which we believe will create a more reliable data set. Tentatively, then – if that modification works as we hope it will – we would recommend this process highly to other departments.

Teaching and Teaching Supplements

--Group work, while having a sound pedagogical basis in the course, makes assessment of individual student learning outcome a bit more challenging. Stronger students likely "carried" weaker or less motivated students so that mapping the quality of the final project to the individual group members is potentially misleading. Use of group work might incorporate some individual weighting based on peer assessment to control for the "free rider" issue.

--Students responded more to personal experiences. As a result, students who made deeper connections often exceeded or met standards on the common assessment. For instance, the relevance of content in the context of discussions regarding Critical Race Theory increased

when connected to larger issues in society. EDU 210 plays a significant role in understanding current cultural, racial, and socio-political dynamics.

Additionally, instructors noted that the following also impacted assessment data:

- **Reading Assignments:** Students who were naturally strong readers tended to excel by completing the reading. Students who consistently read the assignments also contributed to class participation and discussion. Students who did not possess the self-efficacy or motivation to read, were often hesitant to participate in class discussion.
- **Group projects/collaboration:** Due to COVID-19 and subsequent absences, group projects were affected. Group members who did no have attendance issues successfully presented projects to their peers. Students with attendance issues appeared to not perform as successfully in presentations and did not participate. Freshmen and sophomores who experienced COVID-19 restrictions during their last few years of high school, may not have had the opportunity to develop collaborative skills.

The Department of Curriculum and Instruction is committed to engaging students around issues of equity, inclusion, and social justice. We will continue to examine effective practices for our students' learning and engagement. Including ways to engage multiple learning preferences and developing tools to engage in thoughtful analysis and civil discourse during challenging conversations.

--Time management is important when assessing learning outcomes. The instructor provided time in class in Spring 2021 for students to work on the assessment if they wanted since at that point so many felt adrift. She did not do that in the Fall as the class was behind in course material they needed for their final essay. This undoubtedly skewed some of the results.

--It's important to teach history as a context to the present and a prologue to our future. It's important to make the learning activities interesting and engaging rather than putting emphasis on memorizing some dates and events.

--Since the last assessment of BRC 235 in 2015, the conversion of editing software from AVID to Adobe Premiere has allowed students to learn in a much more intuitive process due to Adobe's simple and easier to use interface. One of the additional benefits of working with Adobe Premiere is the commonality between all Adobe Suite applications (i.e., Photoshop, After Effects). Students quickly become familiar with these additional applications that complement the editing process.

--It is important to craft assignments that clearly articulate the outcomes you are seeking to measure. We continually revise our assignments to improve our articulation of what we are looking for students to demonstrate.

--It is important to realize that students have different learning styles, especially when it comes to computing. Some take to computer use much more quickly than others, and some have more prior experience than others. Additionally, Mac users needed a bit more assistance with PC usage than I originally thought, which might be a factor in other courses that utilize computers heavily.

--A strategy that we used during this assessment cycle was to beef up the assignments in HDV 301 and 302, which are the prerequisite courses for the capstone HDV 400. We also broke down the larger assignments in 400 to include more formative feedback before students tackle the larger papers. Both of these strategies seem to be working well.

--More time was spent covering the link between real data and mathematical models, as well as the utilization of statistical software (in this case R) to evaluate data using those models, however, it should be noted that the additional focus on this content comes at a cost. When more focus is placed on certain topics that inevitably leads to less time to focus on other content. Therefore consideration should be placed with respect to finding a balance between the concepts that need to be covered in a course such as MAT 354.

--Not really directly related to assessment, but I have noticed students have fundamental holes in their knowledge of how computers work at a basic level. It seems to be getting worse in my opinion, I think this is largely related to the easy access to handheld devices that have partly replaced the need for computers as we know them. This means that students are more and more likely to have gotten by in High School with little or no interaction with an actual desktop/laptop computer. In order to combat this, I've started a series of lectures in 206 (and other courses) called Computer Fundamentals. It covers all kinds of things, including:
1) Understanding computer storage (RAM vs. Hard Drives)
2) File Infrastructure
3) Understanding File Extensions
4) Basic Computer Care
5) saving
6) backing up work

--Motivation for scientific career is something that requires students to undertake initiatives. Instead of Assignment/Exam oriented evaluation, project based evaluation help with achieving LOs.

--The students' computer and information basic skills may have grown slightly with the online learning. However, the computer and information more sophisticated skills necessary for a physics laboratory, as well as the development of the research techniques, the ability to synthesize the information were at higher level for the in-person laboratories. Therefore, the student benefit more from in-person laboratories, as expected.

That the students need to be given instructions on how to do search in different areas. For example, based on learning outcome 2 the students were stronger in searching the databases for articles related to their research work, however, they were not as successful in searching the resources for safety information. The reason is that we had a workshop through which the students were instructed how to use the available databases for journal articles, but there is no instructions or practices for searching resources for safety information.

<u>Other Advice, Comments, and Suggestions</u>

--That GE outcomes need to be considered a bit more broadly in light of new efforts to dismantle systemic problems like those aimed at through the creation of the new DEI category. Before doing this assessment, in the general field of exhaustion predicated by teaching through the pandemic, I thought, "sure, a new category makes sense as a solution." But I can see now how a lack of line-level rethinking in terms of outcomes fails to account for systemic issues adequately. Of course, I understand the pragmatic nature of the language in this outcome–but that kind of "of course" is of course at the heart of what perpetuates the status quo.

--This has been touched upon already but perhaps the single most important lesson learned from this round of assessment has been the significant and often devastating impact the pandemic has had upon student learning. This is especially true for our most disadvantaged students. Before the pandemic many of these students had great difficulty overcoming their lack of academic preparation and tough economic position. The pandemic exacerbated this situation. [pandemic]

--To state the obvious, flexibility and empathy are critical when attempting to assess student learning in the midst of a pandemic that has killed 900,000 Americans. On a daily basis instructors are performing pedagogical triage in the classroom while mentally, physically, and financially students are contending with unprecedented challenges. It is extremely difficult for all parties to wrestle with very complex historical questions when it feels the world is coming apart. [pandemic]

--It might be helpful to address and explain two trends which might explain our findings around assessing student ability to perform basic operations of personal computer use. First, one assessment question on the test asked students about how they insert headings into documents while conforming to APA formatting standards for heading content. Since the last assessment (2018), the American Psychological Association updated their formatting and citation guidelines in the 7th edition. One specific change made in the 2019 version is that student papers no longer require a running head. Students were able to demonstrate competency with inserting page numbers into headings because that formatting guideline has stayed the same. Second, the questions assessing personal computing knowledge on tests were worded using Microsoft Word terminology. However, since the last assessment (2018), many students use Google Docs as their preferred word processing software instead of Microsoft Word. Combined, these two trends may account for why no students exceeded expectations in the personal computer use assessment category.

--One of the biggest challenges of CSS 235 is the lack of accessibility to computer editing stations. We have no designated lab for video editing workshops and students without a laptop are forced to edit in Mahar 6 or the twenty-four hour room in Penfield. This can be difficult as Mahar 6 is not always available, and the editing computers in Penfield are Macs (some students prefer PC) and only a limited number are available. More workshop time with the software and

specific assignments focused on sound mixing will help improve the creative/technical ability to use video/sound mixing tools.

--Not all courses work well in an online delivery mode, and statistics and research methods seem to fit that profile. Judging computer and information literacy when all course sections are being delivered online was especially challenging this last year.

--Some courses do not work as well in an online format, and statistics and research methods seem to fit that profile. Our students were much more successful in these learning outcomes in the last assessment in 2019.

--Overall, we learned that COVID helped in some ways because students AND faculty were forced to alter their ways of teaching and learning. This resulted in more use of virtual mediums such as zoom meetings and more use of Google Suites. [pandemic]

--Perhaps sometimes we should do more of what works well. I hadn't considered reinforcing or expanding the use of some of these skills in this course after students demonstrate they can do them. They are skills needed in every JLM class, so why not emphasize them more in this lower-level course.

--We have just highlighted areas that some linguistics students find challenging: a) understanding the need to sort and organize linguistic data; b) identifying the patterns and generalizations, c) drawing and stating the inferences from the data, and d) using multiple data sources to support the analyses, findings and interpretations. We wonder if these challenges are limited to linguistics majors and what actions are taken by other programs to address these challenges. If these challenges are not limited to linguistics majors (as we suspect they are not), university-wide efforts can be made. For example, if we find sorting and organizing data is a challenge with students in multiple disciplines, we might start addressing this issue as early as GE courses.

--While we do not expect these skills to be fully developed in GE courses as some of these skills are discipline-specific, we believe that concerted, university-wide efforts, sustained by department and program-specific efforts, will have a stronger and more long-lasting impact on student learning and the development of these skills.

--For the most part, the students are motivated in performing research because they get to choose their own topic related to atmospheric science.

--It is important to learn the strengths and weaknesses of the course by reviewing both quantitative and qualitative data for the course as a feedback and learning experience. It is also good to do a longitudinal/trend data analysis by reviewing a few years of assessment.

--Teaching the course remotely due to the pandemic and even now that we are back on campus presents issues but also improvements. For example, even now that we are back in class I still

have students join a Google Meet so what I project is the same size on their screen then the low resolution overhead projectors. The use of video conferences allows students to meet more efficiently outside of class, especially when they don't live close to one another. One area that was very difficult during remote instruction is not being able to easily see multiple computers and also to monitor if students were staying on task during collaborative learning exercises. [pandemic]

--It may be useful for other General Education assessors to identify 3 specific grammar issues (such as the ones impacting students' fiction writing) and place a focus upon addressing them—even if the course is not explicitly focused upon grammar—to improve students' writing overall, as writing is integral to success in the arts and humanities. In addition, it was noted that splitting classes into small workshop groups (of 4-5 students) may be more effective in engaging students than utilizing large-group workshopping—especially in the online environment—as it resulted, in 2021, in improved "class spirit."

--Students badly need a first semester college wide course on study skills and possibly two semester course.

Appendix 3 – CY 2018 & CY 2021 Comparison

CY 2018 & CY 2021 comparison--aggregated by category*
*percentages may not sum to 100% due to rounding **C&IL: Computer and Information Literacy

American History LO#1	assessed	exceeding	meeting	approaching	not meeting
CY 2018 (10 courses)	297	100 (33.7%)	106 (35.7%)	66 (22.2%)	25 (8.4%)
CY 2021 (7 courses)	450	116 (25.8%)	150 (33.3%)	133 (29.6%)	51 (11.3%)

American History LO#2	assessed	exceeding	meeting	approaching	not meeting
CY 2018 (6 courses)	224	91 (40.6%)	81 (36.2%)	36 (16.1%)	16 (7.1%)
CY 2021 (7 courses)	448	100 (22.3%)	155 (34.6%)	136 (30.4%)	57 (12.7%)

American History LO#3	assessed	exceeding	meeting	approaching	not meeting
CY 2018 (6 courses)	207	91 (44.0%)	80 (38.6%)	28 (13.5%)	8 (3.9%)
CY 2021 (7 courses)	446	108 (24.2%)	169 (37.9%)	138 (30.9%)	31 (7.0%)

C&IL** LO#1	assessed	exceeding	meeting	approaching	not meeting
CY 2018 (25 reports)	684	306 (44.7%)	301 (44%)	41 (6%)	36 (5.3%)
CY 2021 (33 reports)	994	602 (60.6%)	289 (29.1%)	57 (5.7%)	46 (4.6%)

C&IL LO#2	assessed	exceeding	meeting	approaching	not meeting
CY 2018 (25 reports)	707	385 (54.5%)	244 (34.6%)	66 (9.3%)	12 (1.2%)
CY 2021 (33 reports)	971	391 (40.3%)	431 (44.4%)	91 (9.4%)	58 (5.9%)

C&IL LO#3	assessed	exceeding	meeting	approaching	not meeting
CY 2018 (25 reports)	577	252 (43.7%)	235 (40.7%)	73 (12.7%)	17 (2.9%)
CY 2021 (33 reports)	999	465 (46.5%)	386 (38.6%)	77 (7.7%)	71 (7.1%)

Fine & Performing Arts	assessed	exceeding	meeting	approaching	not meeting
CY 2018 (17 courses)	1159	496 (42.8%)	448 (38.7%)	157 (13.5%)	58 (5%)
CY 2021 (14 courses)	738	262 (35.5%)	334 (45.3%)	105 (14.2%)	37 (5%)

Writing (ENG 102) LO#1	assessed	exceeding	meeting	approaching	not meeting
CY 2018 (60 sections)	110	11 (10%)	49 (44.5%)	44 (40%)	6 (5.5%)
CY 2021 (41 sections)	183	54 (29.5%)	88 (48.1%)	32 (17.5%)	9 (4.9%)

Writing (ENG 102) LO#2	assessed	exceeding	meeting	approaching	not meeting
CY 2018 (60 sections)	110	10 (9.1%)	33 (30%)	36 (32.7%)	31 (28.2%)
CY 2021 (41 sections)	183	50 (27.3%)	73 (39.9%)	47 (25.7%)	13 (7.1%)

Writing (ENG 102) LO#3	assessed	exceeding	meeting	approaching	not meeting
CY 2018 (60 sections)	110	9 (8.2%)	48 (43.6%)	39 (35.5%)	14 (12.7%)
CY 2021 (41 sections)	183	46 (25.1%)	74 (40.4%)	49 (26.8%)	14 (7.7%)

Percentage meeting or exceeding
American History LO#1 CY 2018 69.4%   LO#1 CY 2021 59.1%
American History LO#2 CY 2018 76.8%   LO#2 CY 2021 56.9%
American History LO#3 CY 2018 82.6%   LO#3 CY 2021 62.1%

Computer &Information Literacy LO#1 CY 2018 88.7%   LO#1 CY 2021 89.7%
Computer &Information Literacy LO#2 CY 2018 89.1%   LO#2 CY 2021 88.7%
Computer &Information Literacy LO#3 CY 2018 84.4%   LO#3 CY 2021 85.1%

Fine and Performing Arts CY 2018 81.5%   CY 2021 80.8%

Writing (ENG 102) LO#1 CY 2018 54.5%   LO #1 CY 2021 77.6%
Writing (ENG 102) LO#2 CY 2018 39.1%   LO #2 CY 2021 67.2%
Writing (ENG 102) LO#3 CY 2018 51.8%   LO #3 CY 2021 65.5%

a few comments

The number of American History courses assessed for each learning outcome decreased from ten to six in CY 2018 because four courses only assessed and provided data for the first student learning outcome. It needs be noted that this oversight was corrected in American History assessment for CY 2021.

11 of the 25 CY 2018 Computer and Information Literacy assessment reports were not included in the aggregated totals for the category because of either missing data or maths errors; that number was more than halved in CY 2021 assessment with 5 of the 33 reports not included for the same aforementioned errors. Departments and programs assessing multiple courses results in an increase in Computer and Information Literacy assessment reports in CY 2021

In all categories save Fine and Performing Arts, the total number of student work assessed increased in CY 2021.