General Education Assessment Report – AY 2019-20

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1 INTRODUCTION

The intent of FSW's General Education Program is to foster lifelong learning and establish academic excellence, interdisciplinary dialog, and a social responsibility among students. In that light, the purpose of the program is to: 1) measure against baseline data for the number of students receiving scores of 3 or higher on relevant dimensions of the rubric, 2) measure against baseline data for the number of students receiving scores of 3 or higher on relevant dimensions of the rubric across sites (Online, Dual Enrollment, and Traditional), 3) establish a baseline for the number of student artifacts receiving a score of 3 or higher on relevant aspects of the rubric across credit achievement level (e.g. achievement with respect to number of credits earned), 4) establish a baseline for the number of student artifacts receiving a score of 3 or higher on relevant aspects of the rubric across pre-requisite definition (e.g. achievement with respect to pre-requisite courses), and 5) develop FSW-based rubrics for assignments/assessments administered at FSW.

Before the beginning of AY 2014-2015, the General Education Assessment Subcommittee of the Learning Assessment Committee (LAC) adopted (see June 9, 2014 GEAS Subcommittee Meeting Minutes) the Association of American Colleges & Universities (AAC&U) Value Rubric Model (Rhodes and Finley, 2013) after an extensive review of General Education assessment models employed throughout higher education. During AY 2014-2015, the subsequent assessment during that academic year, each of the five competencies (Communication, Critical Thinking, Technology/Information Management, Global Socio-cultural Responsibility, and Scientific and Quantitative Reasoning) was assessed through assignments identified by faculty as fitting the criteria of the competency (Braselton, 2011; Rhodes and Finley, 2013) by way of a pilot study. As aligned with the AAC&U Value Rubric Model and Value Rubric Case Studies, Florida SouthWestern State College (FSW) faculty from across disciplines voluntarily submitted assignments aligned with the competencies. Assignments do not have to be uniform if outcomes, rating, and the rationale for rating (rubric interpretation) are uniform (Rhodes & Finley, 2013). Outcomes are identified by the competency definition at FSW. Calibration sessions were conducted before scoring in each competency. Inter-rater reliability studies were performed on the results (see AY 2014-2015 General Education Assessment Report). Following the completion of the pilot study, recommendations by the LAC focused on professional development opportunities in the strengthening of assignment guidelines.

Assessment continued in AY 2015-2016 using the same method to begin employing the use of the AAC&U rubrics for a comprehensive review of the Communication (COM) competency, both oral and written. Discussions pertaining to the results of the analysis led to (1) a development of the goal to strengthen dual enrollment (concurrent) participation in general education assessment and (2) professional development opportunities in supporting students' writing (see AY 2015-2016 General Education Assessment Report).

The third year in the evolution, AY 2016-2017, again using the same method, saw the use of AAC&U rubrics for another comprehensive review this time of the Critical Thinking (CT) and the Scientific and Quantitative Reasoning (QR) competencies (see AY 2016-2017 General Education Assessment Report).

Note that the AAC&U Value Rubric was used for the CT competency, but an FSW developed rubric was used for QR. Discussions pertaining to the results of the analysis led to the development of FSW specific rubrics in preparation for the shift from the old competencies (Communication, Critical Thinking, Technology/Information Management, Global Socio-cultural Responsibility, and Scientific and Quantitative Reasoning) to the new competencies (Communicate, Research, Evaluate, Analyze, Think, Investigate, Visualize, and Engage {C-R-E-A-T-I-V-E}) which occurred in the Fall 2016 term.

General Education assessment continues in AY 2017-2018. The change for this year is in response to the newly adopted competencies which are based on faculty-led identification. Instead of asking faculty to volunteer assignments, once the LAC votes on which competencies to study in a given assessment, courses are randomly sampled from a list of courses which were identified by faculty as encompassing that competency.

A complete list of the years for analysis of each competency is shown below:

- AY 2015-16: Communication*
  - *most closely associated with Communicate in the current competencies
- AY 2016-17: Critical Thinking*, Quantitative Reasoning*
  - *most closely associated with Think and Evaluate in the current competencies
- AY 2017-18: Research, Investigate
- AY 2018-19: Visualize, Engage
- AY 2019-20: Analyze, Research

For AY 2019-20, the 'Analyze' competency will be the last to utilize an adopted rubric as the transition nears completion. Concomitantly, the 'Research' competency will be the first to be measured using the new rubrics. With this report begins a new phase of assessment for the General Education competencies. First, the last FSW-specific rubric will be written based on feedback from assessment in the case of the 'Analyze' competency. Second, an FSW-specific rubric will be utilized in assessment for the first time allowing a first glimpse into what achievement looks like at FSW through the lens of a rubric adopted with the typical student and class of FSW in mind.

For additional detail on further analysis not provided in this report, please contact Dr. Joseph F. van Gaalen, Asst. VP, IR, Assessment & Effectiveness, Academic Affairs (jfvangaalen@fsw.edu; x16965).

2 RESEARCH (R)

The outcome of the 'Research' competency at FSW is that by completion of the general education requirements, students will be able to research and examine academic and non-academic information, resources, and evidence. The LAC will measure the percentage of artifacts scored a 3 or higher on the individual dimensions of the FSW-specific rubric. Figures 1 through 12 below depict achievement and inter-rater reliability for the 'Visualize' competency in college-wide, Associate of Arts (AA) cohorts, as well as value-added studies as they relate to outcome goals and objectives. For the study, the LAC utilizes an FSW-specific rubric developed by a selection of faculty representing various areas at the college (Figure 1). This is the first time the 'Research' FSW-specific rubric was utilized for competency achievement assessment. Results of the study are shown in Figures 1 through 14.

2.1 Overall Achievement, Modality Comparison Study, & Inter-Rater Reliability

RESEARCH	Capstone (4)	Accomplished (3)	Developing (2)	Deficient (1)
Research Question & Thesis	Constructs a research question as reflected by a coherent and insightful thesis statement.	Constructs a research question as reflected by a thesis statement.	Develops an imprecise or vague research question reflected by an insufficient thesis and / or a limited framework for the topic / assignment.	Lacks a research question as reflected by an insufficient thesis and a minimal framework for the topic / assignment.
Information Retrieval	Interpolates with discernment credible evidence through the selection of material(s) closely related to the topic and relevant to one another within the context of the assignment.	Interpolates credible evidence through the selection of material(s) closely related to the topic and relevant to one another within the context of the assignment.	Identifies credible evidence through the selection of materials mostly relevant to the topic and one another within the context of the assignment.	Names some credible evidence, but with a limited relationship to the topic and / or one another within the context of the assignment.
Interpretation of Evidence	Evaluates information, and draws apposite and perceptive inferences from selected sources.	Analyzes information and draws apposite inferences from selected sources.	Identifies information and draws simplistic inferences from selected sources.	Identifies information but draws minimal inferences from selected sources.
Community of Scholarship	Adopts and synthesizes the viewpoints and contributions of experts from an appropriate discipline(s).	Integrates the viewpoints and contributions of experts from an appropriate discipline(s).	Summarizes the viewpoints and contributions of experts from an appropriate discipline(s).	Identifies the viewpoints and contributions of experts from an appropriate discipline(s).
Documentation of Sources	Uses an appropriate citation style to correctly document sources in a bibliography and / or in text with minimal errors in formatting the citations (bibliography / in-text).	Uses an appropriate citation style to document most or all selected sources, but has a few errors in formatting the citations (bibliography / in-text).	Uses an appropriate citation style to document some sources, but has several or many errors in formatting the citations (bibliography / in-text).	Uses a citation style to document few sources, but has significant and disruptive errors in formatting the citations (bibliography / in-text).

Figure 1. FSW-specific 'Research' rubric utilized in the study.

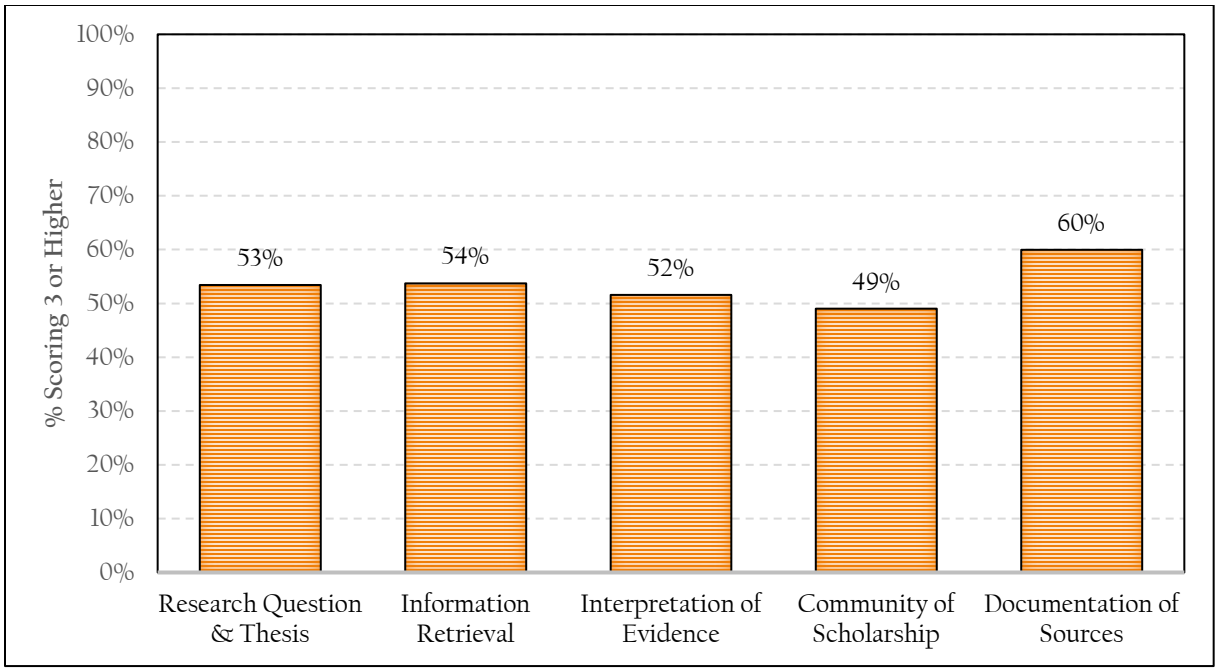

Figure 2. 'Research' achievement at 3 or higher across all rubric dimensions for 217 artifacts from 27 sampled course sections.

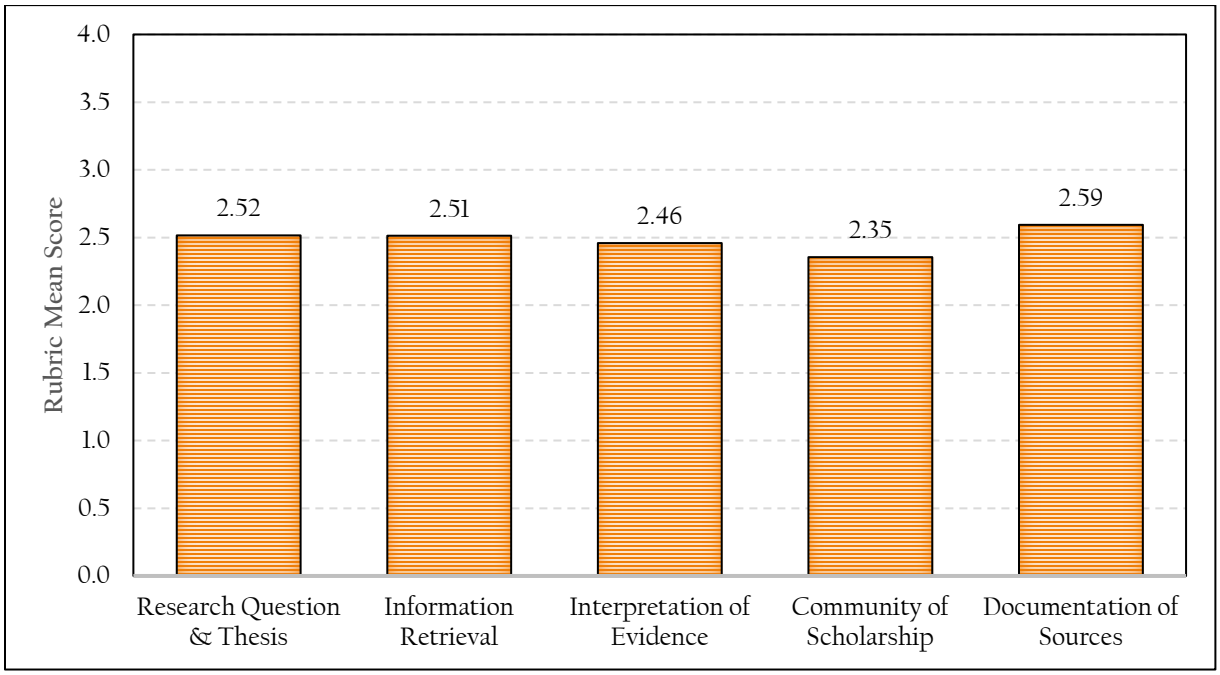

Figure 3. Mean score by rubric dimension for 'Research' for 217 artifacts from 27 sampled course sections.

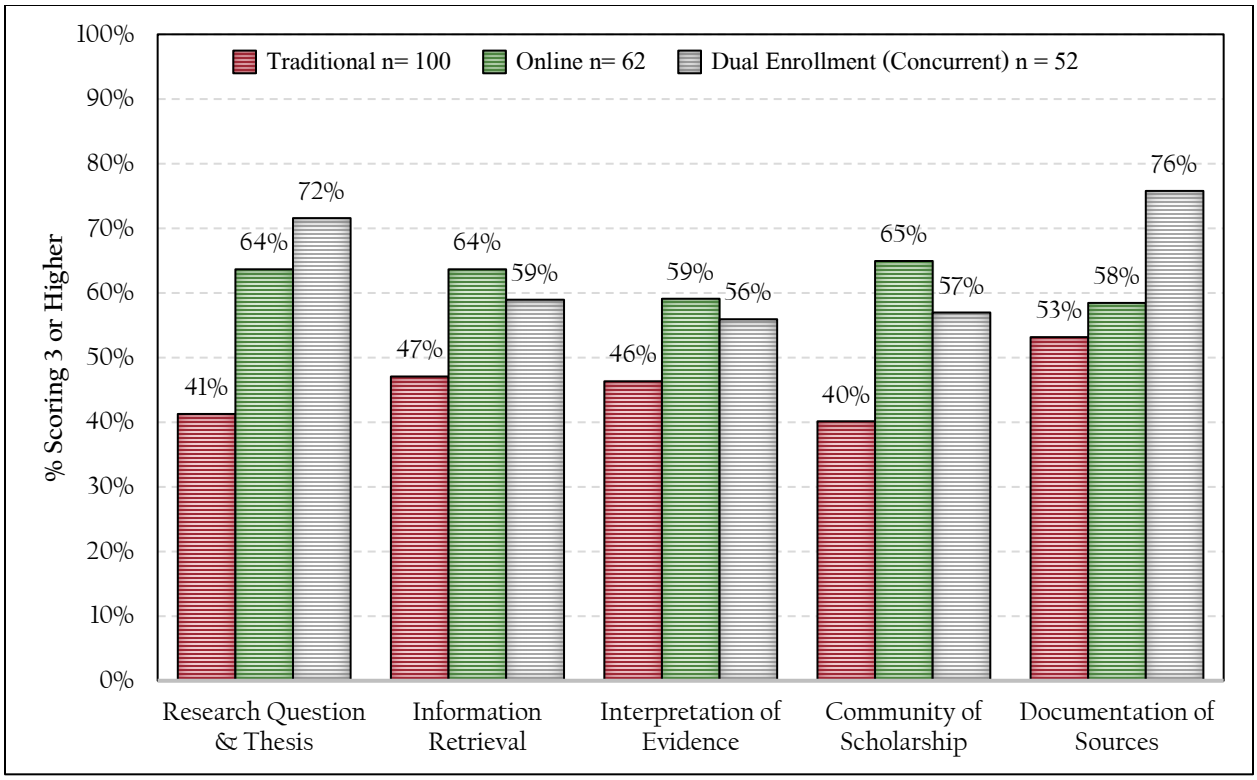

Figure 4. Comparison of 'Research' achievement by modality at 3 or higher across all rubric dimensions for 213 artifacts from 27 sampled course sections. Traditional (red), n=100, Online (green), n=62, Dual Enrollment (concurrent) (gray), n=52.

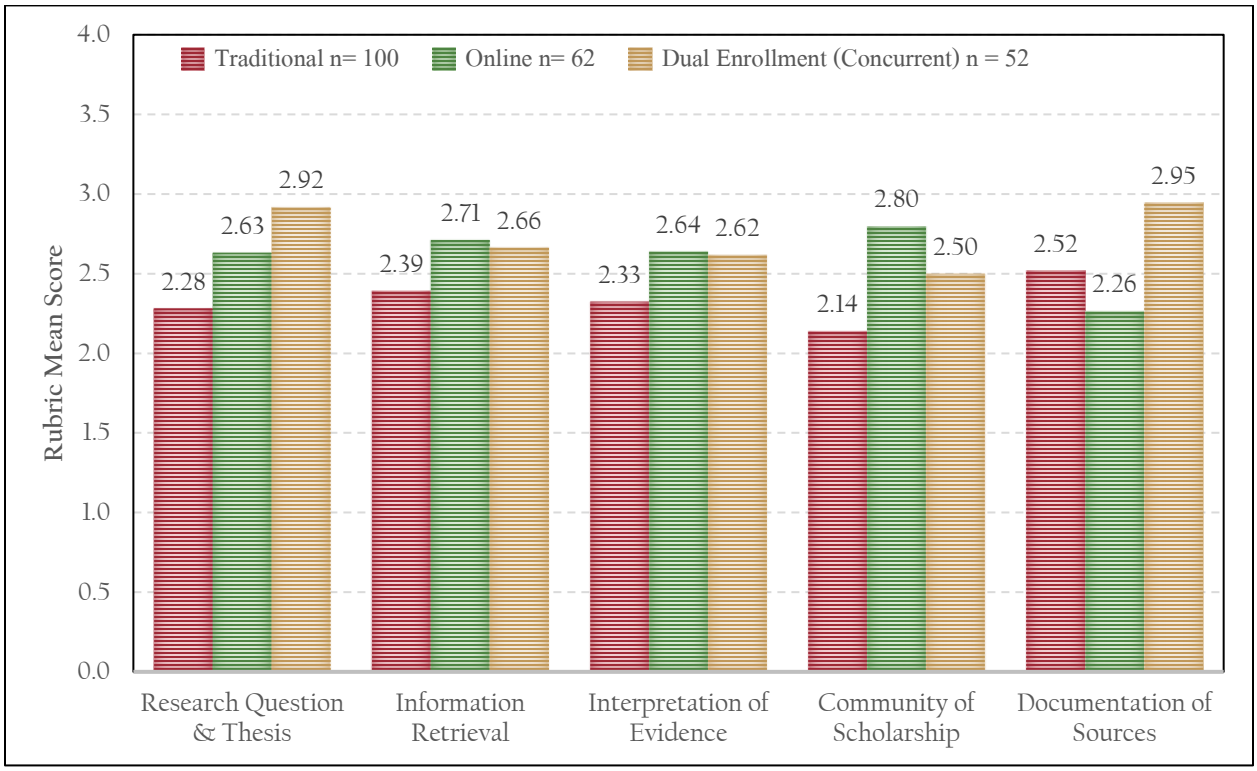

Figure 5. Mean score of 'Research' for each rubric dimension by modality across all rubric dimensions for 213 artifacts from 27 sampled course sections. Traditional (red), n=100, Online (green), n=62, Dual Enrollment (concurrent) (gray), n=52.

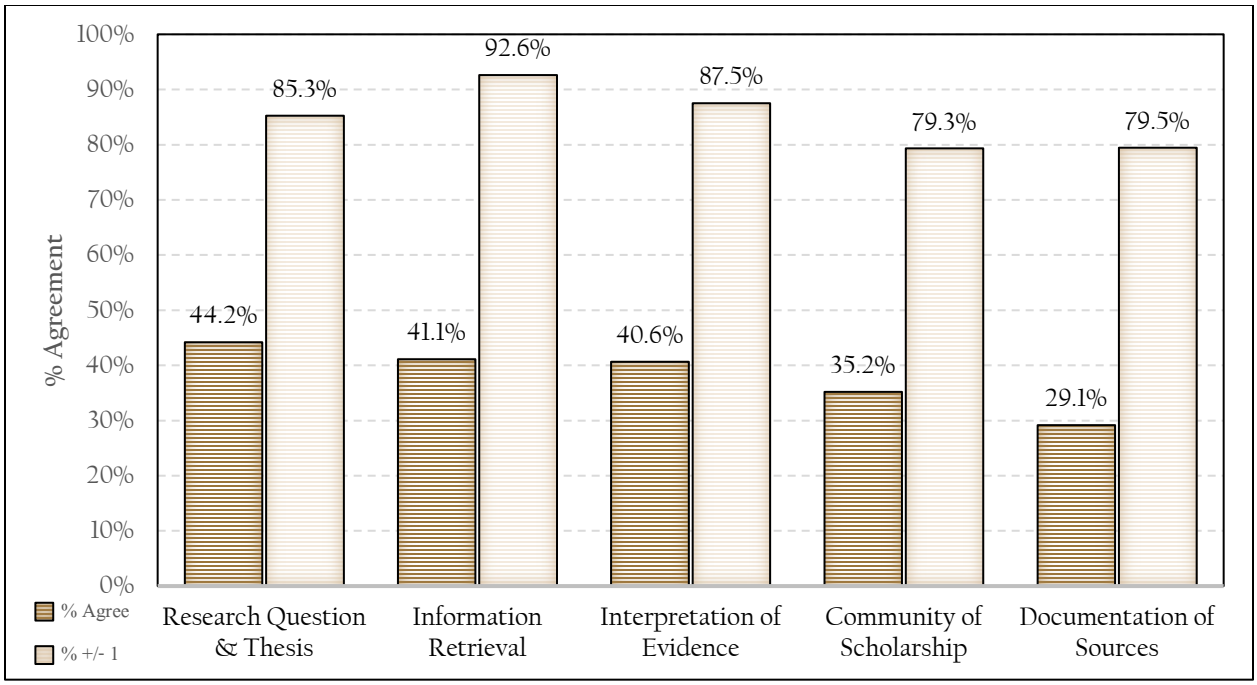

Figure 6. Inter-rater reliability (as %) for the 'Research' competency. Each artifact was scored by two scorers. Percentage (%) of agreement (dark beige) is defined as cases where scores by each scorer were identical. Percentage (%) +/- 1 agreement (light beige) is defined as cases where scores by each scorer were within 1 of each other. κ-statistic for the study exhibits similar results. Results are herein presented as percentages for reader convenience.

2.2 Results for A.A. General Studies Only

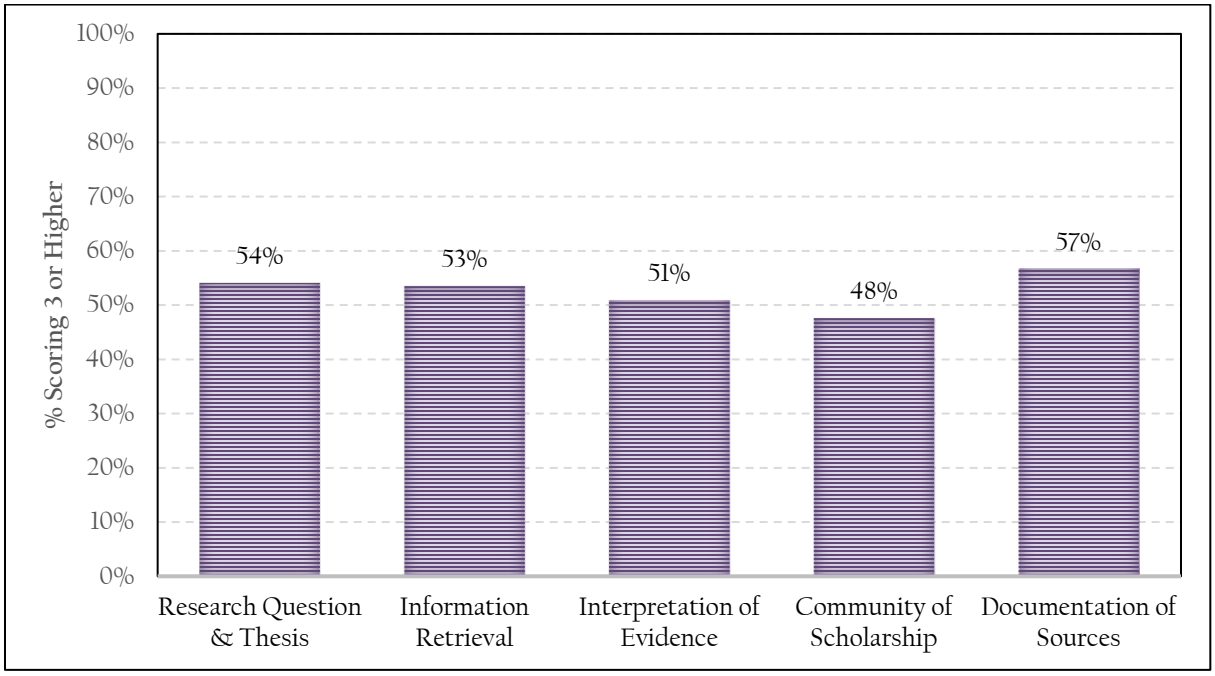

Figure 7. 'Research' achievement at 3 or higher across all rubric dimensions for AA courses only for 187 artifacts from 24 sampled course sections.

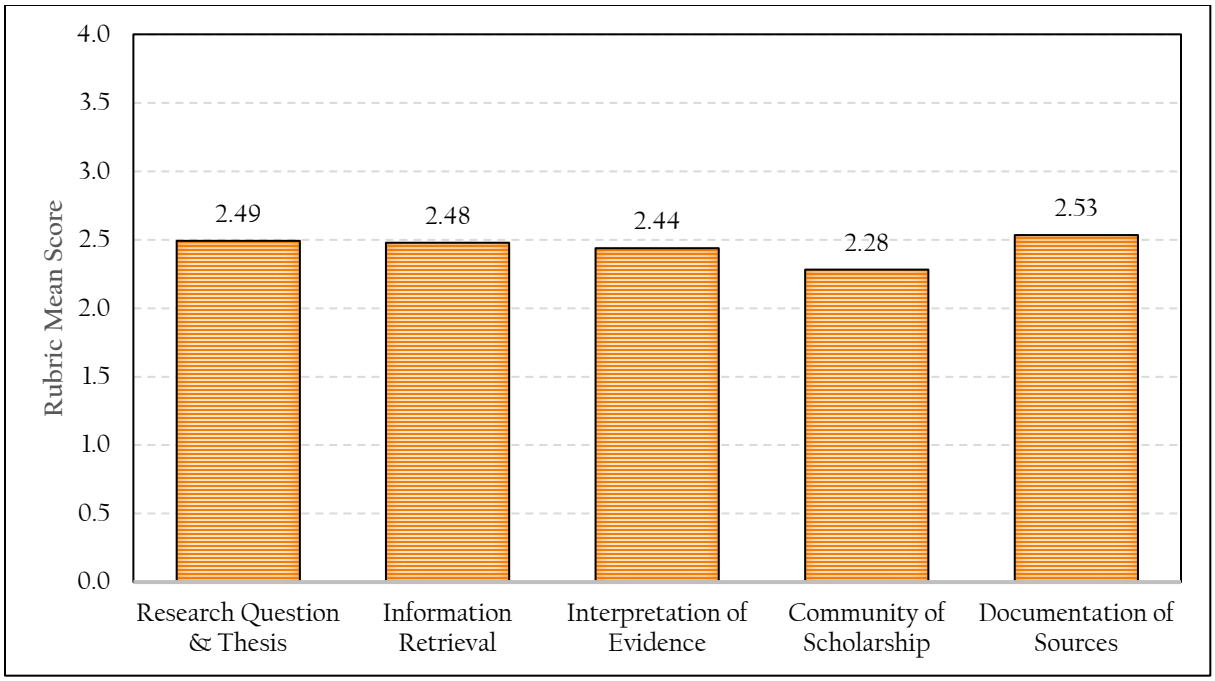

Figure 8. Mean score by rubric dimension for 'Research' for AA courses only for 187 artifacts from 24 sampled course sections.

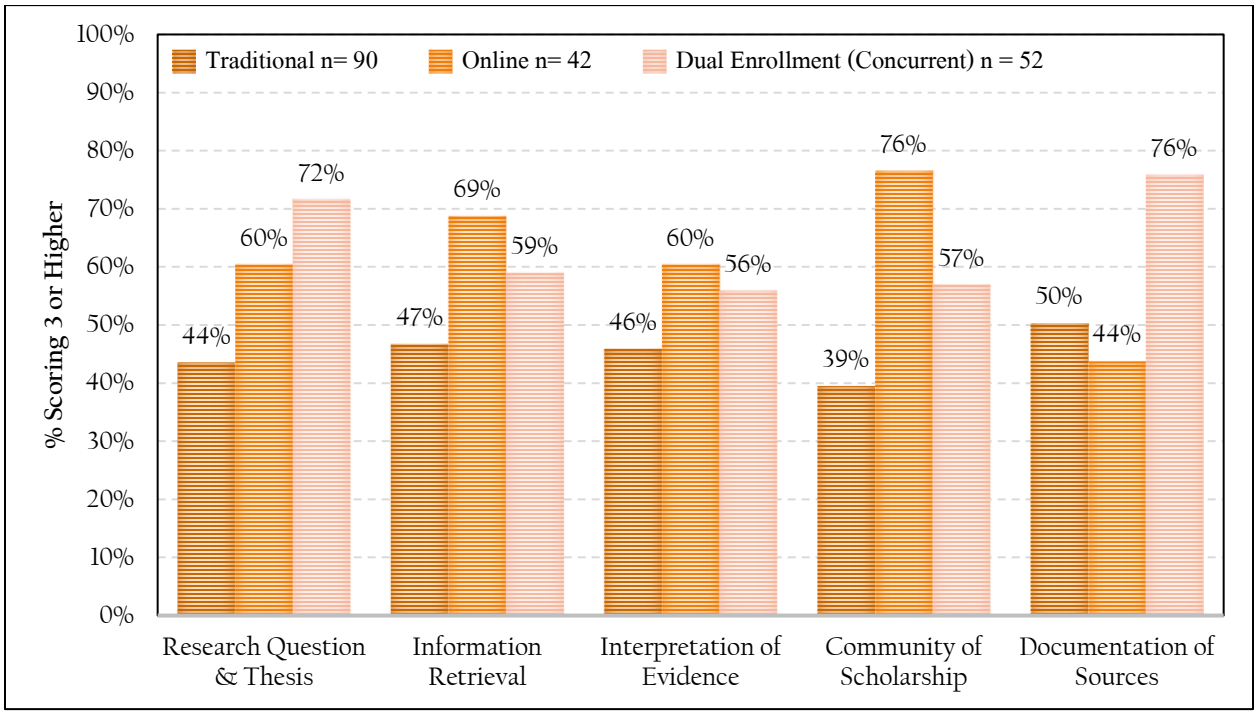

Figure 9. 'Research' achievement at 3 or higher across all rubric dimensions for AA courses only for 187 artifacts from 24 sampled course sections. Traditional (dark orange), n=90, Online (orange), n=42, Dual Enrollment (concurrent) (light orange), n=52.

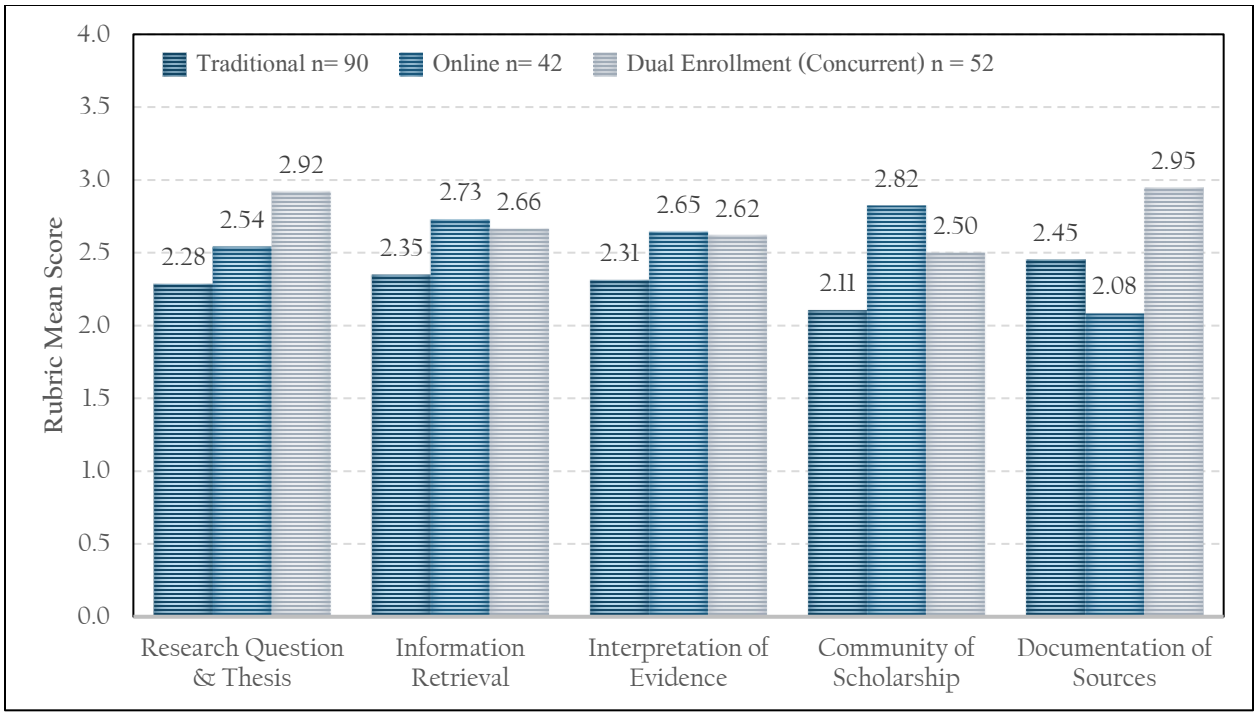

Figure 10. Mean score of 'Research' for each rubric dimension by modality across all rubric dimensions for AA courses only for 187 artifacts from 24 sampled course sections. Traditional (dark blue), n=90, Online (blue), n=42, Dual Enrollment (concurrent) (light blue), n=52.

2.3 Overall Value-added Studies

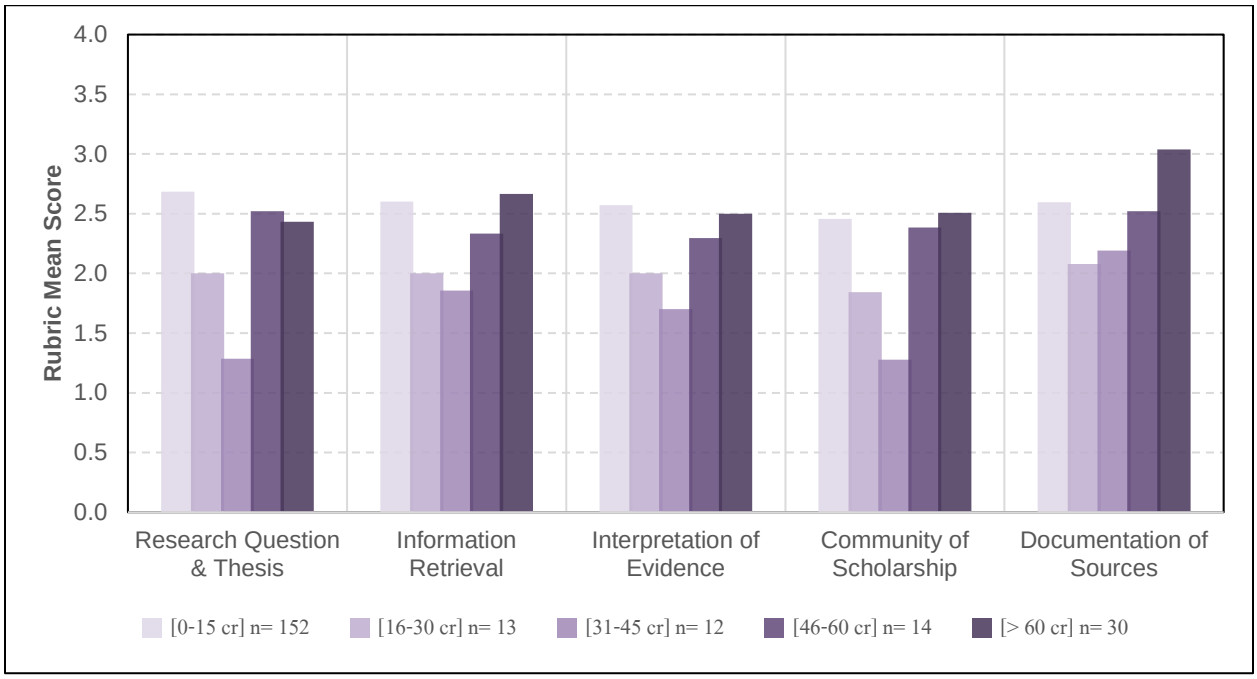

*Figure 11. Comparison of mean score of 'Research' across all rubric dimensions for 217 artifacts in which credit information could be matched to artifact score. From light purple to dark, 0-15 credits earned n=152, 16-30 credits earned n=13, 31-45 credits earned n=12, 46-60 credits earned n=14, and > 60 credits earned n=30. *Credits earned based on number of credits earned entering fall 2019 term.*

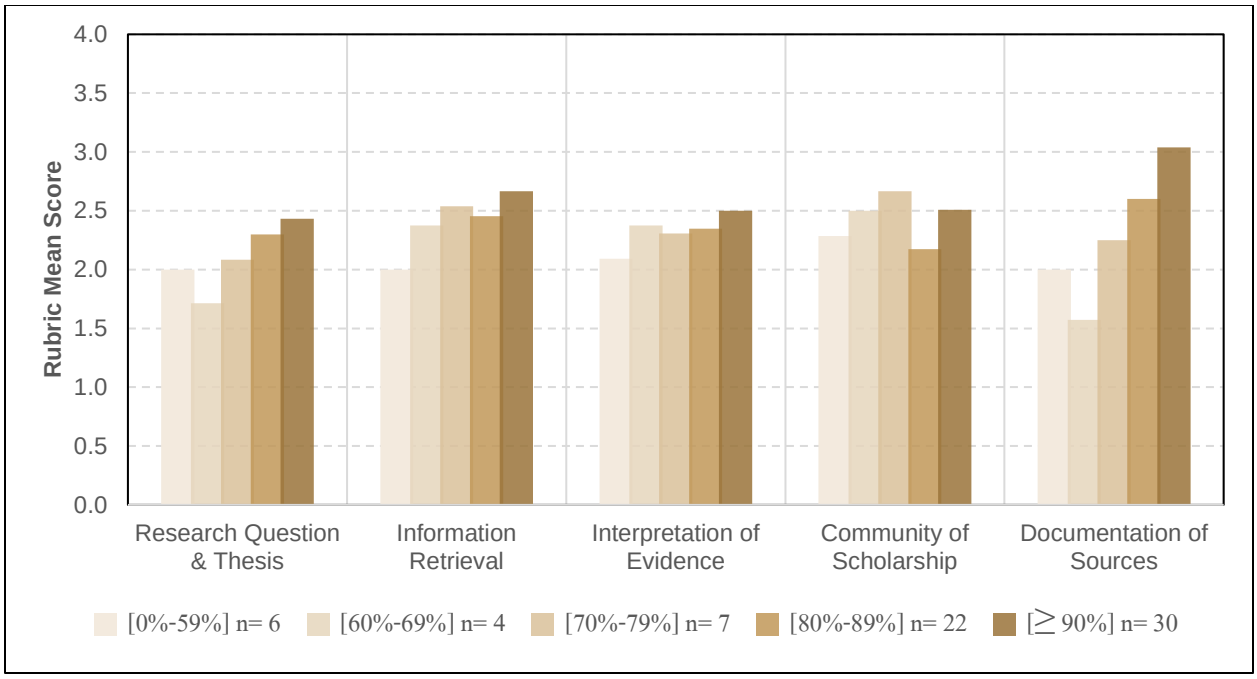

*Figure 12. Comparison of mean score of 'Research' across all rubric dimensions based on course success rates of students. From light beige to dark, students with 0-59% n=6, 60-69% n=4, 70-79% n=7, 80-89% n=22, and 90% or above n=30. *Note that inbound students would not have a success rate at FSW yet, which therefore limits sample size from the overall sample.*

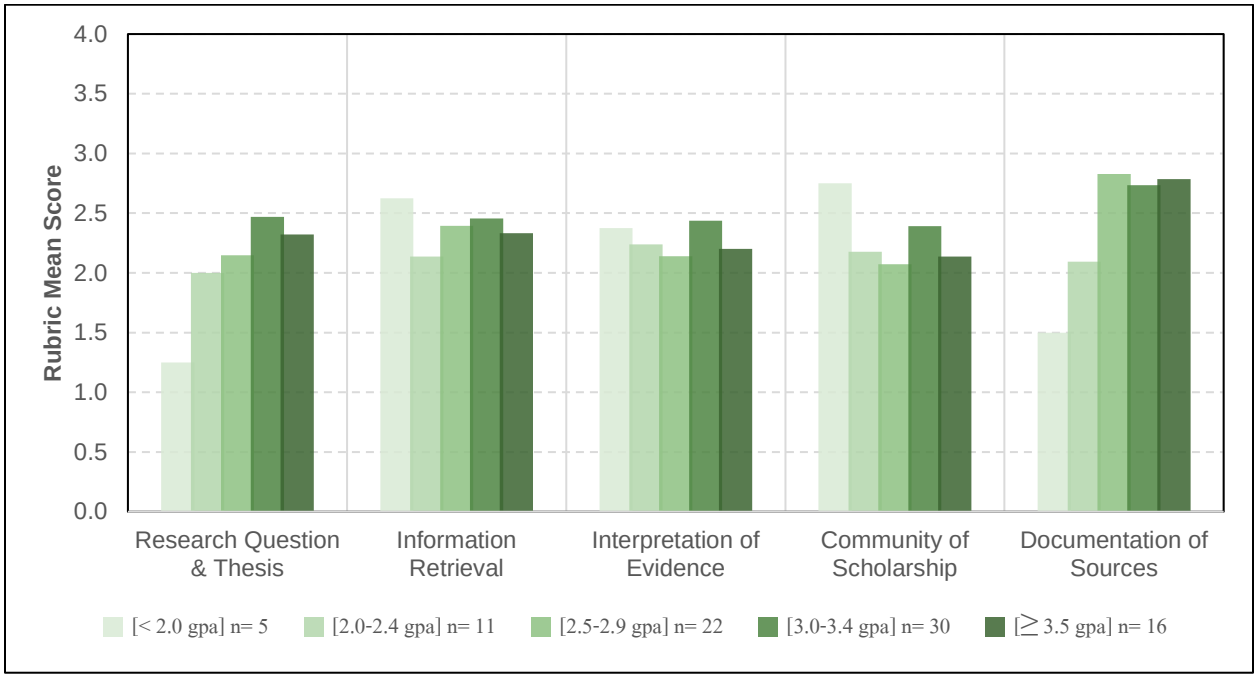

*Figure 13. Comparison of mean score of 'Research' across all rubric dimensions based on GPA. From light green to dark, GPA < 2.0 n=5, GPA 2.0-2.4 n=11, GPA 2.5-2.9 n=22, GPA 3.0-3.4 n=30, GPA ≥ 3.5 n=16. *GPA based on fall inbound GPA; first-time students would therefore not have an inbound FSW GPA, which limits sample size from the overall.*

2.4 LONGITUDINAL STUDY

The 'Research' competency is the first to be measured using the new rubrics. With this report begins a new phase of assessment for the General Education competencies. The school representatives used the Association of American Colleges and Universities (AAC & U) Integrated Learning VALUE Rubric as a foundation for development ultimately adopting only the dimensions (in part) and achievement levels (4-3-2-1) with a 0 if no achievement is met. The rubric defines the fundamental criteria for each learning outcome and outline performance required to demonstrate levels of attainment through the use of Bloom's Taxonomic verbiage. Rubric achievement levels, in descending order: Capstone (4), Accomplished (3), Developing (2), and Deficient (1).

The intent of the rubric developers was to frame language such that the rubric is as inclusive as possible to any and all 'Research' assignments. Careful consideration was paid to providing descriptors detailed enough to score an artifact, but yet to remain in general terms as much as possible to allow for application to a wide assortment of assignment types and styles. In order to increase clarity, action verbs were utilized in each achievement level description. The developers also attempted to place emphasis on dimensions being mutually exclusive, such that users of this rubric can elect to omit any dimension not required of a given assignment. To ensure that non-traditional assignments are scored properly, artifacts representing a variety of modes and media should be utilized during the 'Research' Rubric Calibration Sessions prior to the scoring process.

Because the AAC & U VALUE Rubric was utilized as a foundation for the FSW-specific rubric, the rubric dimensions, while re-worked, are foundationally similar. To exploit this characteristic, this comparison study compares the results by dimension from the AY 2017-18 study to the current AY 2019-2020 study.

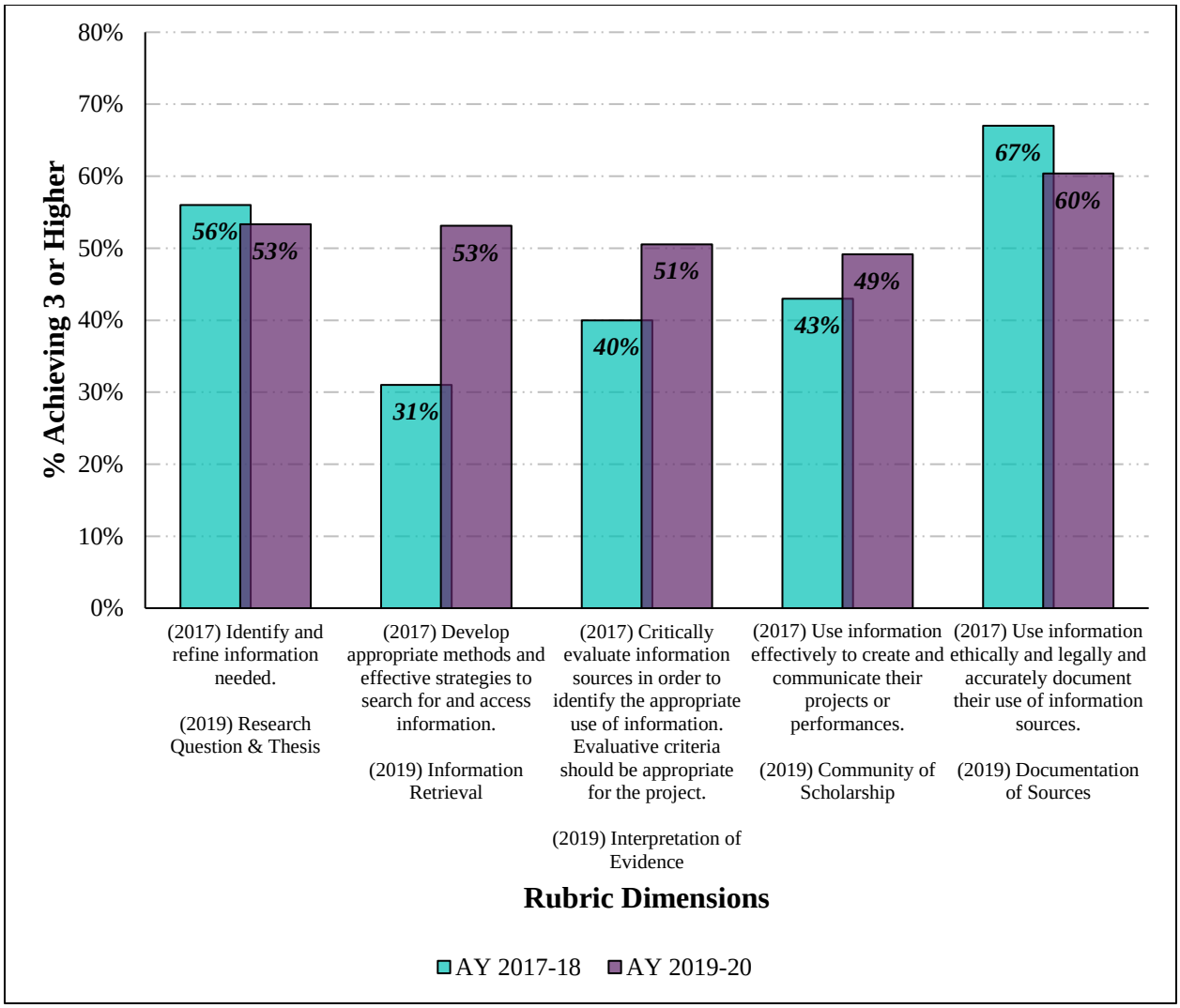

Figure 14. Comparison of AY 2017-18 assessment of the Research competency with the AY 2019-20 assessment. AY 2017-18 study utilized AAC&U VALUE Rubric while the AY 2019-20 study utilized an FSW-specific rubric.

3 ANALYZE (A)

The outcome of the 'Analyze' competency at FSW is that by completion of the general education requirements, students will be able to analyze and create individual and collaborative works of art, literature, and performance. The FSW Learning Assessment Committee will measure the number of artifacts scored a 3 or higher on relevant dimensions of the rubric against the pilot results (AY 2014-2015). Figures 15 through 27 below depict achievement and inter-rater reliability for the 'Analyze' competency in college-wide, Associate of Arts (AA) cohorts, as well as value-added studies.

For the study, the LAC developed a hybrid rubric combining elements from the Cultural Literacy Rubric of Portland Community College and the Cultural Literacy Rubric of the Global Education Achievement group (Figure 15). Feedback from scorers regarding the hybrid rubric for the 'Analyze' competency included two main trends regarding rubric suitability. First, scorers noted some distinction issues in interpreting achievement levels. For example, in the "Making Connections" dimension, the difference

between a '4' and a '3' is the difference in determining whether an artifact "articulates creatively" versus "articulates." The interpretation is vague and carries bias. And second, very few assignments appear to capture the rubric entirely. This is not necessarily a problem as the assignment should be tied to the competency and not the rubric. At the time of writing, the LAC is already tending to the task of writing a new FSW 'Analyze' rubric based on the findings included in this report.

3.1 Overall Achievement, Modality Comparison Study, & Inter-Rater Reliability

PCC & GEA Cultural Literacy Rubrics

	Advanced 4	Proficient 3	Developing 2	Emerging 1
Cultural Frameworks	Analyzes the complexity of culture in terms of values, beliefs and practices, history, politics, economics or communication styles.	Explains complexity of culture in terms of values, beliefs and practices, history, politics, economics or communication styles.	Describes the complexity of culture in terms of values, beliefs and practices, history, politics, economics or communication styles.	Identifies the complexity of culture in terms of values, beliefs and practices, history, politics, economics or communication styles.
Cultural Application & Diversity	Applies understanding of at least one aspect of culture in terms of values, beliefs and practices, history, politics, economics or communication styles to conduct a sophisticated examination of a single culture or a comparative cross-cultural analysis.	Applies understanding of at least one aspect of culture in terms of values, beliefs and practices, history, politics, economics or communication styles to conduct a substantial examination of a single culture or a comparative cross-cultural analysis.	Applies understanding of at least one aspect of culture in terms of values, beliefs and practices, history, politics, economics or communication styles to conduct a partial examination of a single culture or a comparative cross-cultural analysis.	Applies understanding of at least one aspect of culture in terms of values, beliefs and practices, history, politics, economics or communication styles to conduct a superficial examination of a single culture or a comparative cross-cultural analysis.
Power Structures and Interactions	Explains with sophistication an aspect of the foundations and processes that create identity, privilege and oppression and their impact on inequality and interaction among multiple and marginalized groups.	Substantially explains an aspect of the foundations and processes that create identity, privilege and oppression and their impact on inequality and interaction among multiple and marginalized groups.	Partially explains an aspect of the foundations and processes that create identity, privilege and oppression and their impact on inequality and interaction among multiple and marginalized groups.	Superficially explains an aspect of the foundations and processes that create identity, privilege and oppression and their impact on inequality and interaction among multiple and marginalized groups.
Critical Self-Reflection	Evaluates one's own assumptions, judgments and/or biases about one's own culture and the culture of others. And/or: Demonstrates the ability to assess the impact of assumptions, judgments, and/or biases related to one's own and other cultures.	Explains the influence of one's own assumptions, judgments and/or biases during interactions with one's own culture and the culture of others.	Describes own assumptions, judgments and/or biases about self and others.	Identifies little awareness of one's own assumptions, judgments and/or biases about self and others.
Making Connections (from GEA Cult. Lit. Rubric)	Articulates creative connection(s) between this learning experience and content from other courses, past learning, life experiences and/or future goals.	Articulates connection(s) between this learning experience and content from other courses, past learning experiences, and/or future goals.	Attempts to articulate connection(s) between this learning experience and content from other courses, past learning experiences, or personal goals, but the connection is vague and/or unclear.	Does not articulate any connection to other learning or experiences.
Culturally-Informed Responsiveness	Demonstrates with sophistication the ability to inquire, explore, and use diverse perspectives to inform appropriate communication. And/or: Consistently incorporates diverse perspectives when evaluating organizational practices, policy or other culturally inclusive problem solving.	Substantially demonstrates the ability to inquire, explore, and use diverse perspectives to inform appropriate communication. And / or: Mostly incorporates diverse perspectives when evaluating organizational practices, policy or other culturally inclusive problem solving.	Describes differences in perspectives to inform appropriate communication. And/or: Partially incorporates diverse perspectives when evaluating organizational practices, policy or other culturally inclusive problem solving.	Superficially Identifies differences in perspectives to inform communication. And/or: Sometimes incorporates diverse perspectives when evaluating organizational practices, policy or other culturally inclusive problem solving.

Figure 15. Hybrid 'Analyze' rubric utilized in the study.

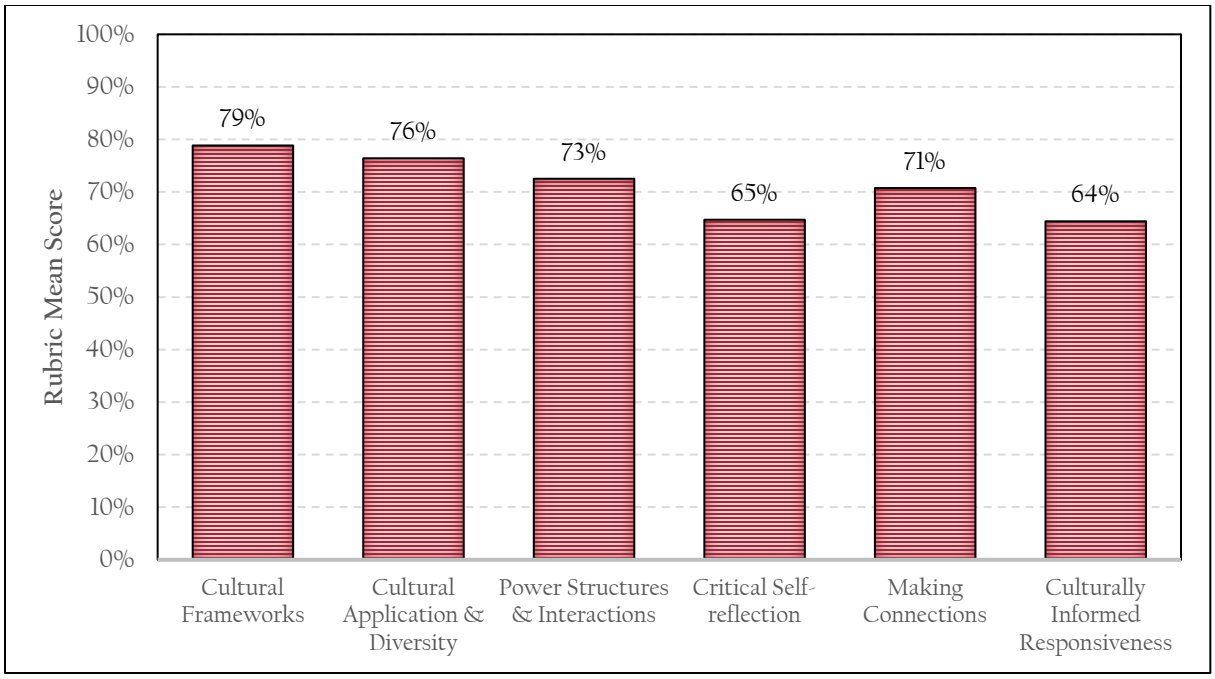

Figure 16. 'Analyze' achievement at 3 or higher across all rubric dimensions for 199 artifacts from 16 sampled course sections.

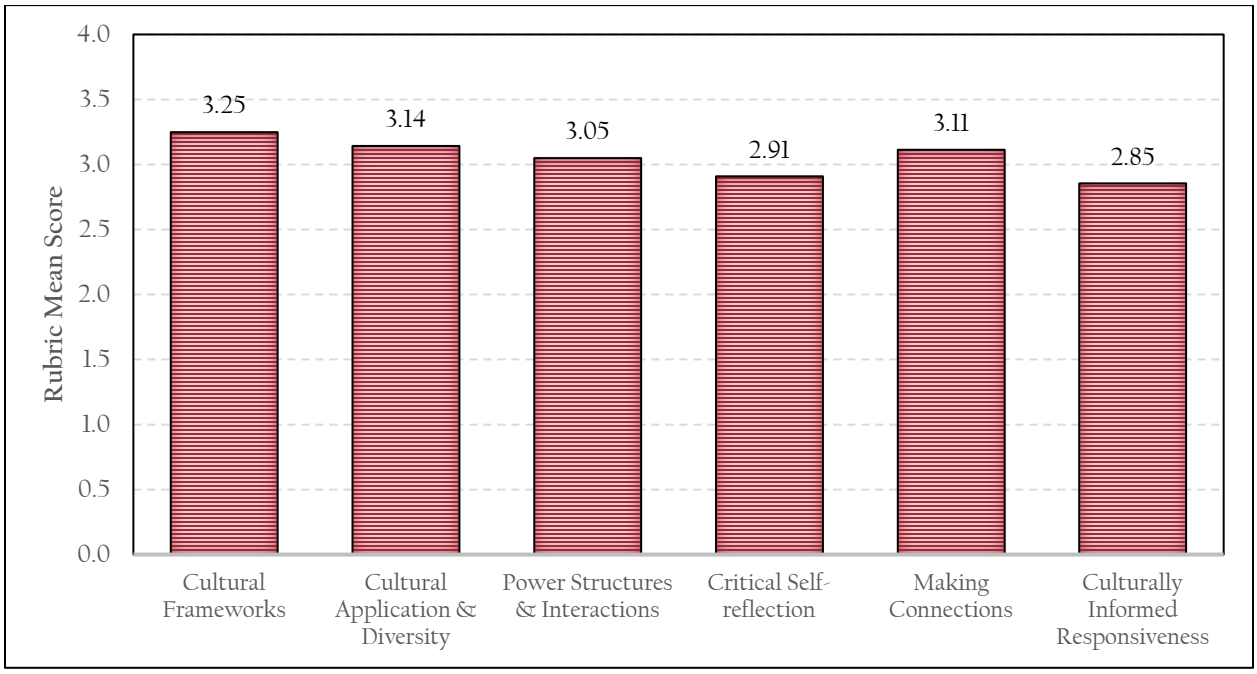

Figure 17. Mean score by rubric dimension for 'Analyze' for 199 artifacts from 16 sampled course sections.

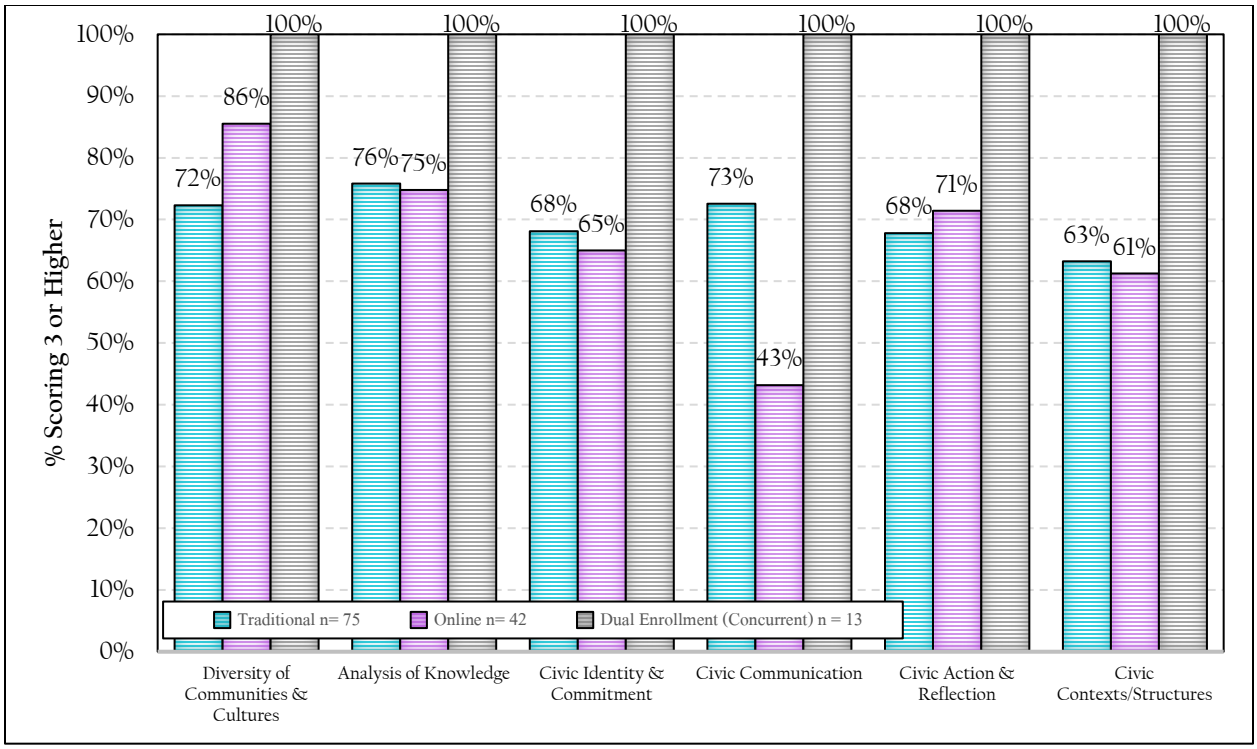

Figure 18. Comparison of 'Analyze' achievement by modality at 3 or higher across all rubric dimensions for 130 artifacts from 16 sampled course sections. Traditional (aqua), n=75, Online (purple), n=42, Dual Enrollment (concurrent) (gray), n=13.

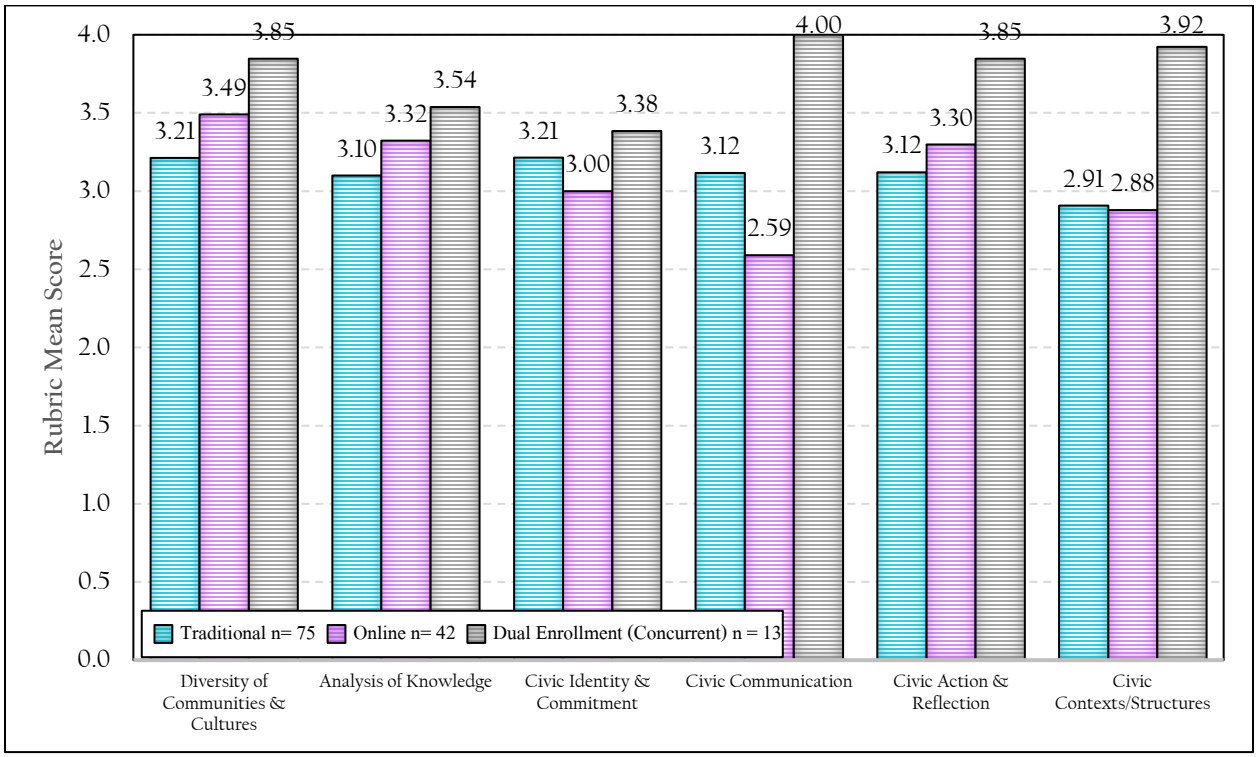

Figure 19. Mean score of 'Analyze' for each rubric dimension by modality at 3 or higher across all rubric dimensions for 130 artifacts from 16 sampled course sections. Traditional (aqua), n=75, Online (purple), n=42, Dual Enrollment (concurrent) (gray), n=13.

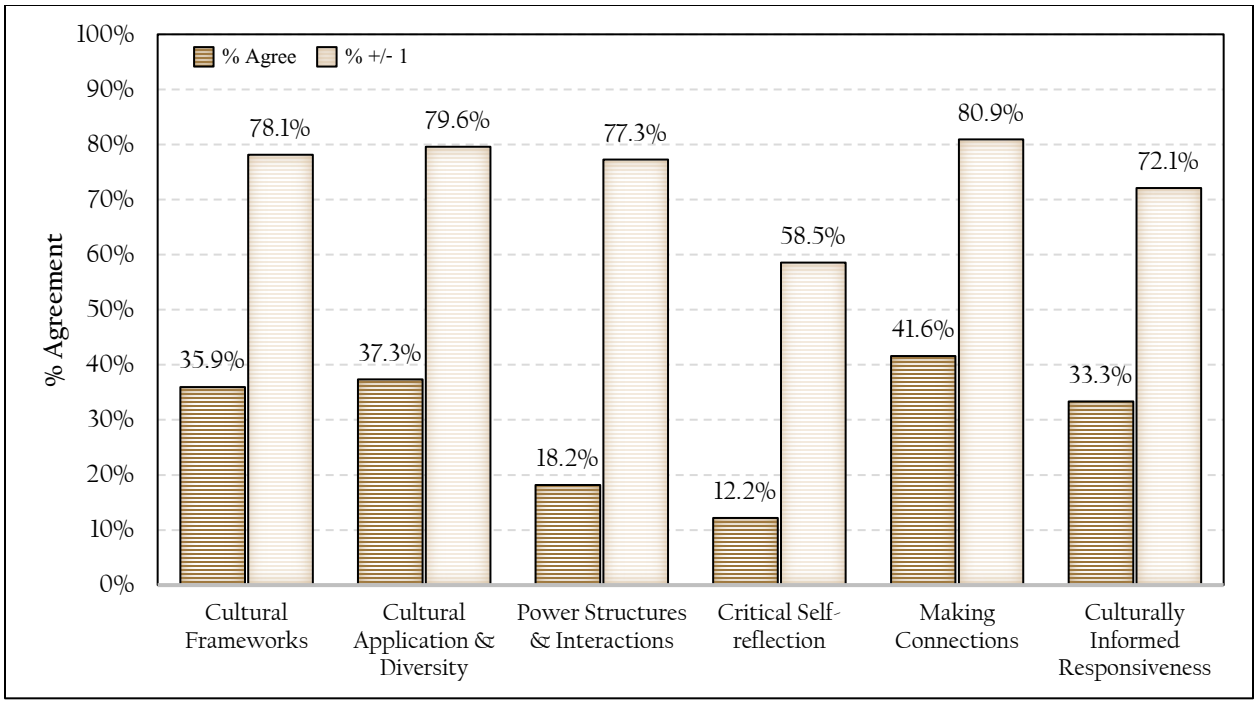

Figure 20. Inter-rater reliability (as %) for the 'Analyze' competency. Each artifact was scored by two scorers. Percentage (%) of agreement (dark beige) is defined as cases where scores by each scorer were identical. Percentage (%) +/- 1 agreement (light beige) is defined as cases where scores by each scorer were within 1 of each other. κ-statistic for the study exhibits similar results. Results are herein presented as percentages for reader convenience.

3.2 Results for A.A. General Studies Only

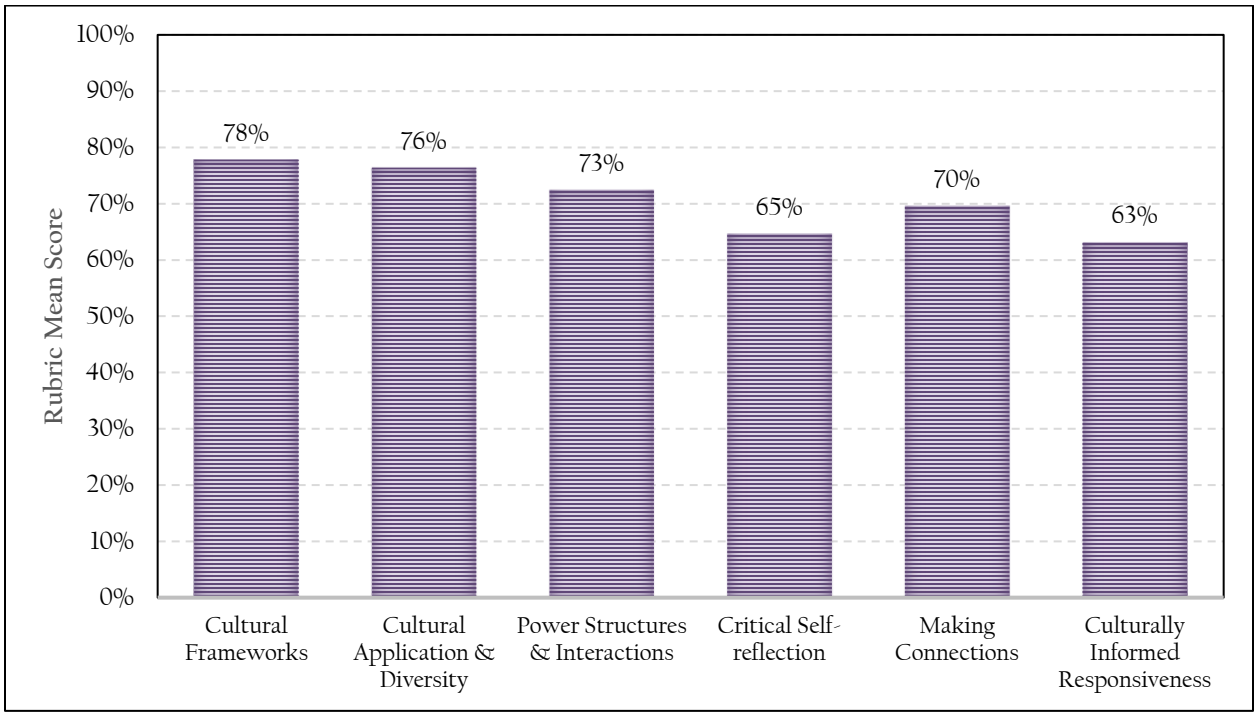

Figure 21. 'Analyze' achievement at 3 or higher across all rubric dimensions for AA courses only for 144 artifacts from 15 sampled course sections.

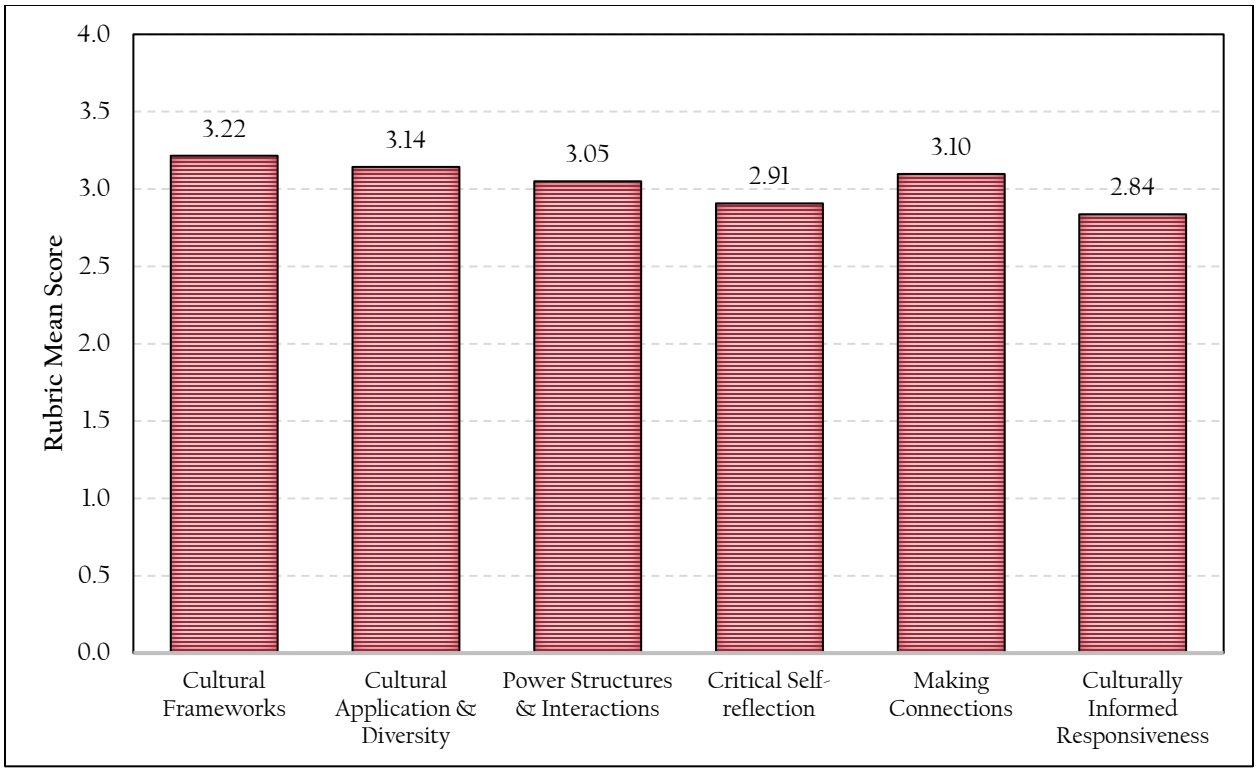

Figure 22. Mean score by rubric dimension for 'Analyze' for AA courses only for 144 artifacts from 15 sampled course sections.

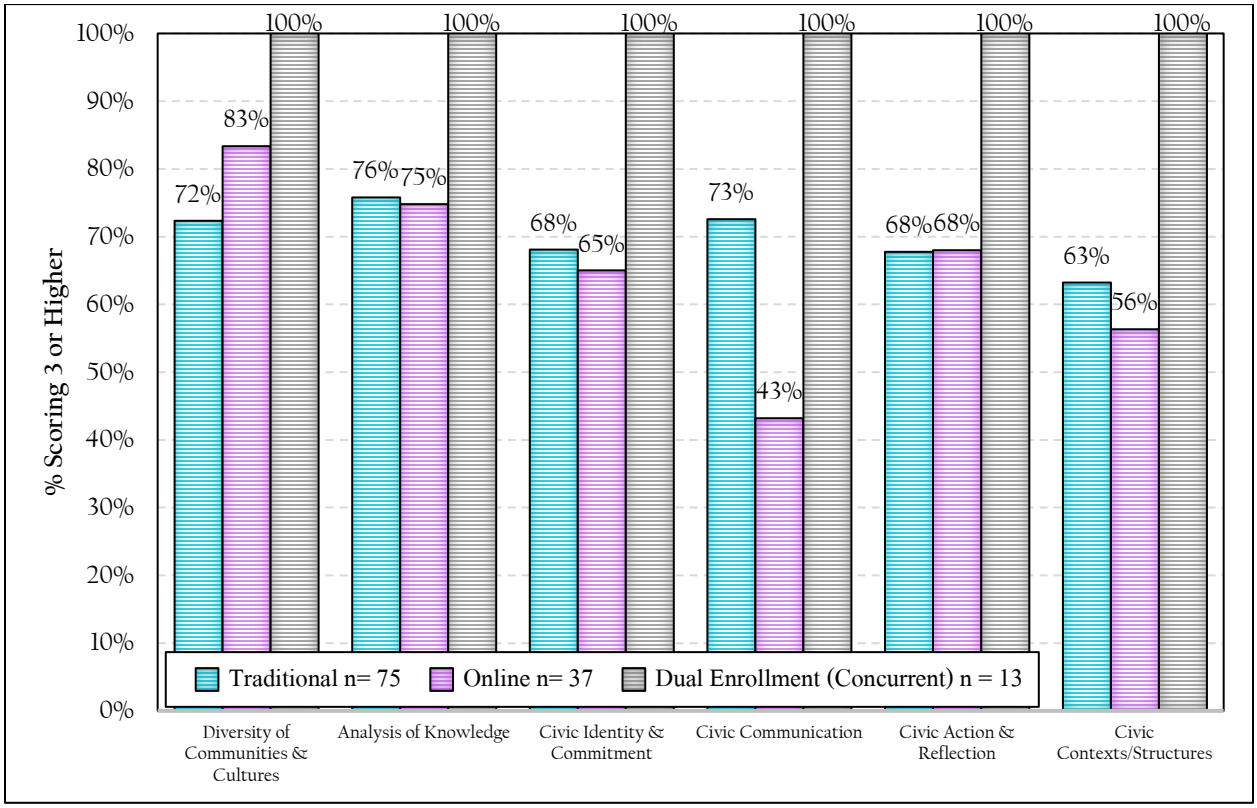

Figure 23. 'Analyze' achievement at 3 or higher across all rubric dimensions for AA courses only for 130 artifacts from 15 sampled course sections. Traditional (aqua), n=75, Online (purple), n=37, Dual Enrollment (concurrent) (gray), n=13.

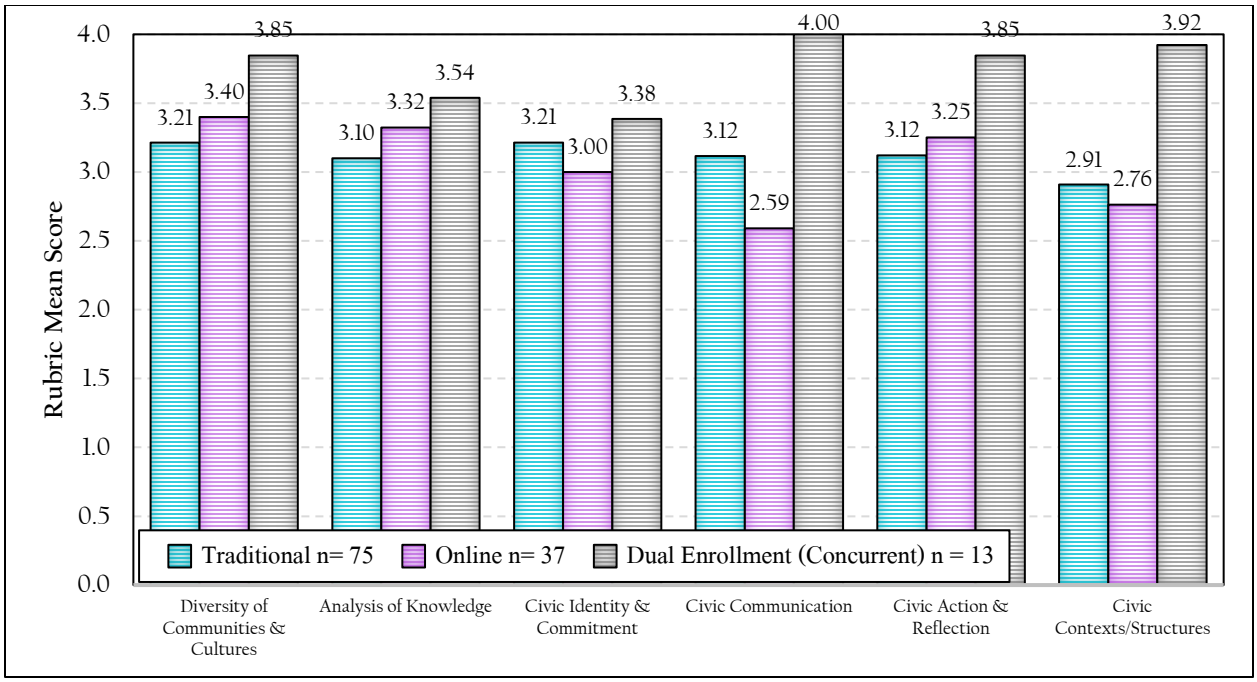

Figure 24. Mean score of 'Analyze' for each rubric dimension by modality across all rubric dimensions for AA courses only for 130 artifacts from 15 sampled course sections. Traditional (aqua), n=75, Online (purple), n=37, Dual Enrollment (concurrent) (gray), n=13.

3.3 Overall Value-added Studies

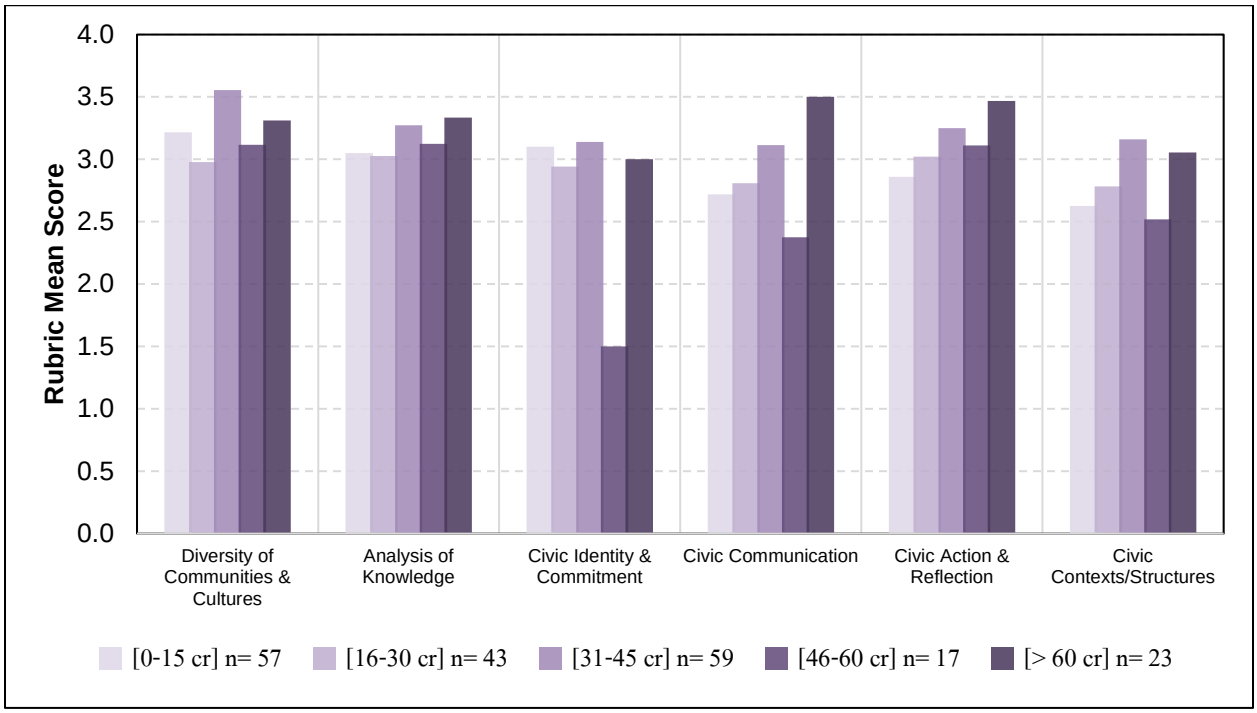

*Figure 25. Comparison of mean score of 'Analyze' across all rubric dimensions for 199 artifacts in which credit information could be matched to at least one of the two artifact scorer's scores. From light purple to dark, 0-15 credits earned n=57, 16-30 credits earned n=43, 31-45 credits earned n=59, 46-60 credits earned n=17, and > 60 credits earned n=23. *Credits earned based on number of credits earned entering fall term.*

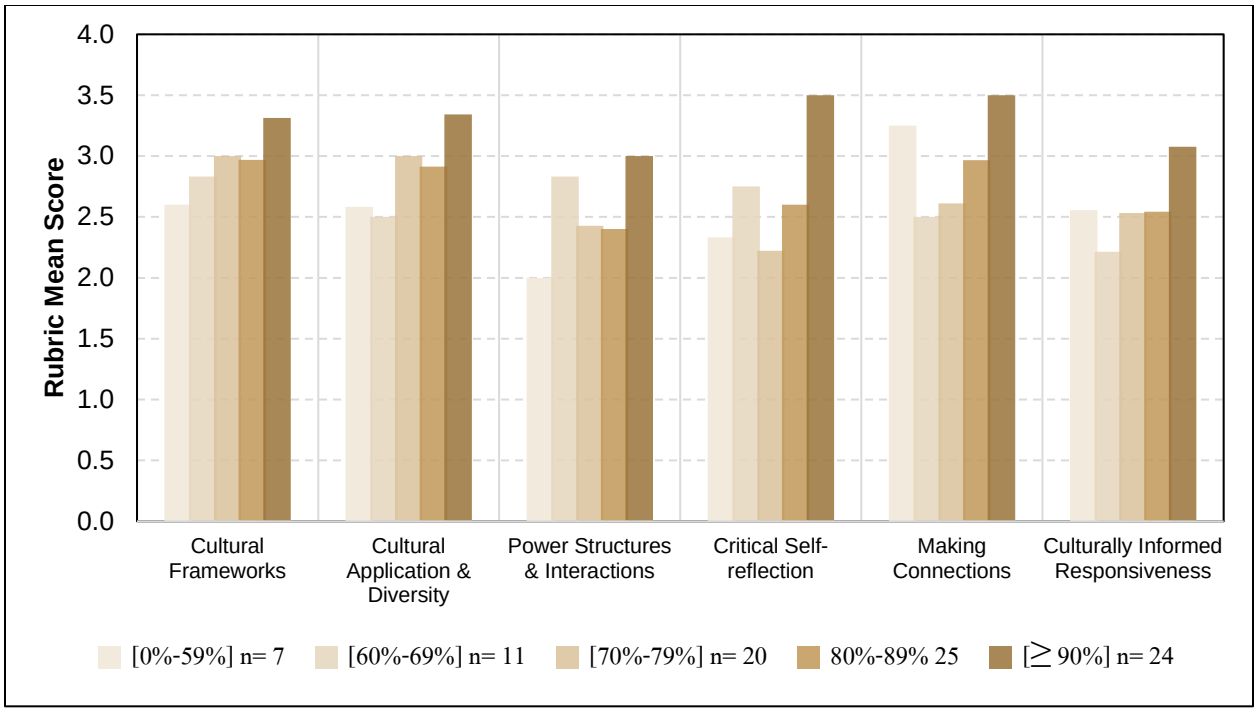

*Figure 26. Comparison of mean score of 'Analyze' across all rubric dimensions based on course success rates of students. From light beige to dark, students with 0-59% n=7, 60-69% n=11, 70-79% n=20, 80-89% n=25, and 90% or above n=24. *Note that inbound students would not have a success rate at FSW yet, which therefore limits sample size from the overall sample.*

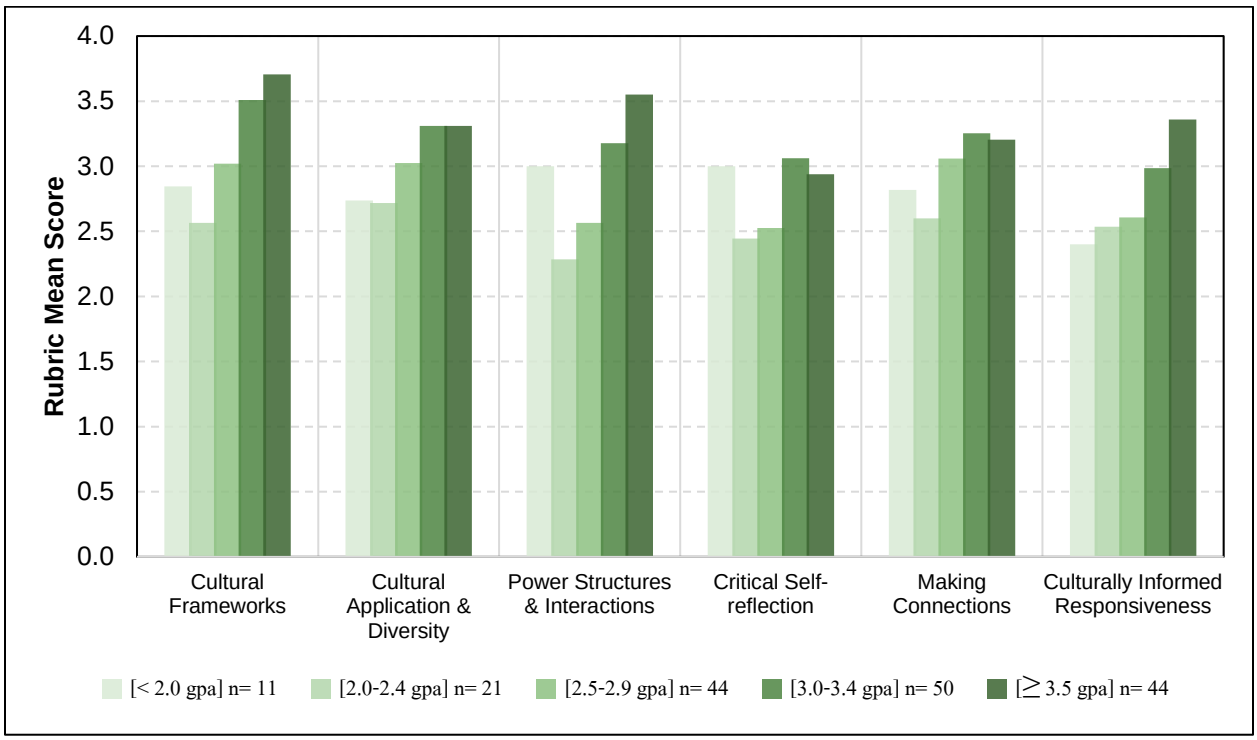

*Figure 27. Comparison of mean score of 'Analyze' achievement across all rubric dimensions based on GPA. From light green to dark, GPA < 2.0 n=11, GPA 2.0-2.4 n=21, GPA 2.5-2.9 n=44, GPA 3.0-3.4 n=50, GPA ≥ 3.5 n=44. *GPA based on fall inbound GPA; first-time students would therefore not have an inbound FSW GPA, which limits sample size from the overall.*

3.4 Longitudinal Study

As this is the first time the 'Analyze' competency has been assessed, there is no longitudinal study available at this time.

4 Competency Overview: General Longitudinal Study

In order to gain perspective into the results shared above, it can be valuable to look at generalized results from previous general education assessment studies at FSW. Because a true longitudinal study is limited due to a transition in both competencies and rubrics utilized, instead of looking at a dimension by dimension comparison, it may be helpful to look at overall scores (combined average of rubric dimensions) from previous general education assessment studies with respect to the current results. Figures 28 and 29 provide these comparisons.

While scorers found many assignments did not include this category and were not scored, going forward reliability will increase over time as the assignments and the rubrics speak to each other better. The more the FSW community embrace the competencies, the more the achievement should rise. In many cases scorers noted that there are cases where students demonstrate further achievement beyond the stated assignment guidelines. Therefore, some of this process is about embracing the achievements of both faculty and students via documentation.

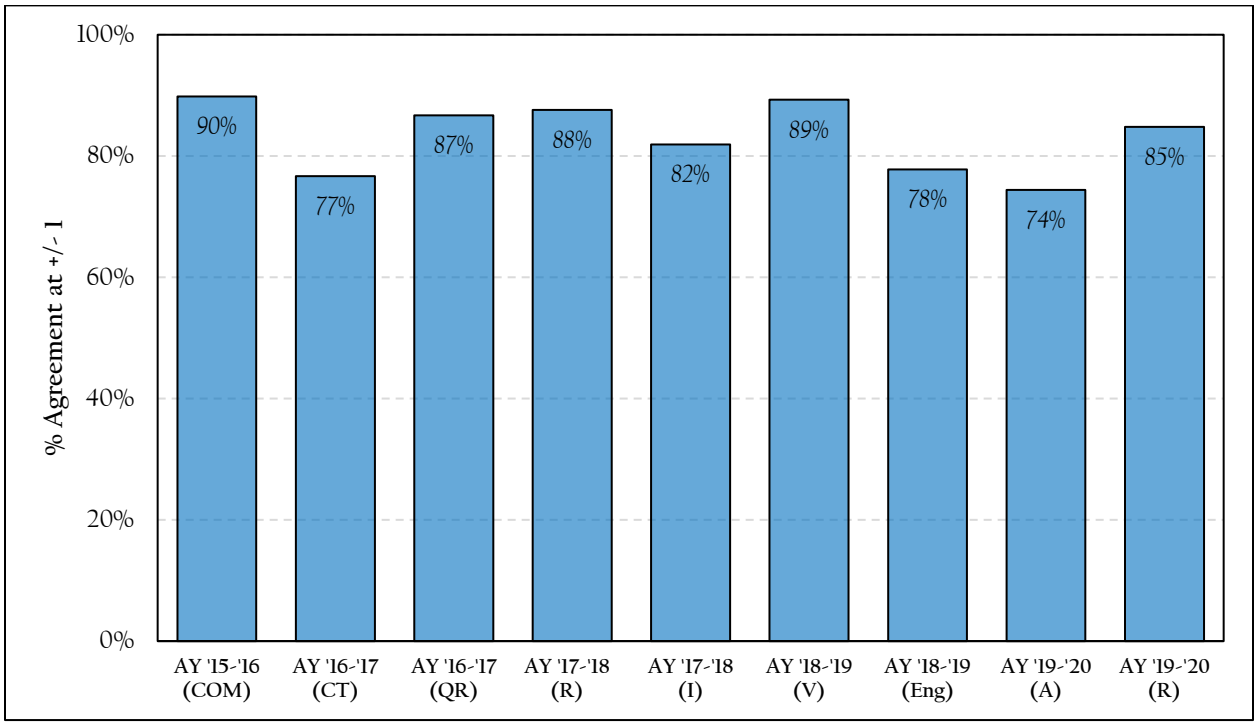

Figure 28. Comparison of inter-rater reliability (percentage (%) +/- 1 agreement) averaged across dimensions by each competency in FSW General Education Assessment cycle.

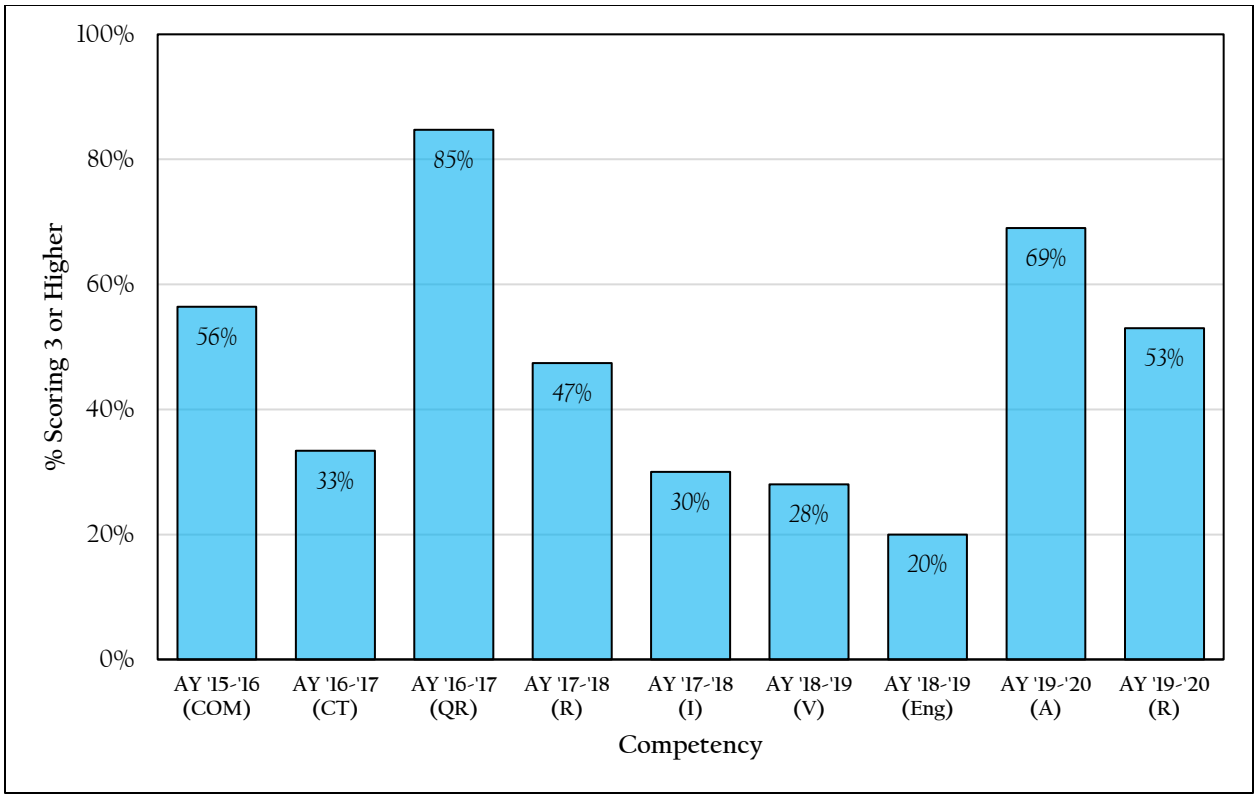

Figure 29. Comparison of achievement at 3 or higher averaged across dimensions by each competency in FSW General Education Assessment cycle.

5 PROFESSIONAL DEVELOPMENT PLANS

When reviewing general education assessment results, it is important to review assignments that are being assessed with respect to the rubric and the competency. Without a strong alignment between the task (competency) and the rubric/assignment, assessment measurements will always yield results more telling of the process and alignment rather than true achievement. This concept can be supported in the work of Reeves (2006) in which the critical factors of learning are highlighted and assessment is one of eight major components.

Through a review of the results laid out above and discussions within the FSW Community two main plans emerged. The first plan is to develop a repository of ideal assignments that line up well with rubrics that would be available to FSW faculty may be a good way of alleviating some of the problems noted by scorers. The plan began in AY 2018-2019 and continues in AY 2019-2020 and beyond. The second is to development assignment building workshops specific to the competency and bring them to departments that are rich in that competency as opposed to housing them at FSW's Teaching and Learning Center (TLC). In short, by bringing the training workshops to department meetings instead of asking faculty to encumber their schedules, the idea would be that support can be provided with a higher yield.

6 CONCLUSIONS

FSW's General Education Program was assessed through randomly sampled from a list of courses which were identified by faculty as encompassing that competency. The study details the results of FSW's General Education assessment for AY 2019-2020 which included the analysis of 'Research' and 'Analyze' from the new C-R-E-A-T-I-V-E General Education competencies. Results also included these same outcomes with respect to courses included in the AA program and value-added studies based on credits earned, success rates of the student from which the artifacts are collected, and GPA from those students.

A drilldown of 'Research' (R) results are as follows:

1. One of five rubric dimensions exhibit greater than 60% achievement at level '3'. The highest scored dimension is "Documentation of Sources" at 60% scoring '3' or higher.
2. Mean achievement levels for each of the five rubric dimensions range from 2.35 to 2.59 on a 4-point scale.
3. In a study comparing online, dual enrollment (concurrent), and traditional artifacts, the traditional modality exhibits the highest in 0 of 5 dimensions. Concurrent dual enrollment exhibits the highest in 2 of 5. Online exhibits the highest in 3 of 5. Results for 2 of 5 dimensions were statistically significantly different.
4. An inter-rater reliability study exhibits rubric scoring agreement ranging from 29% to 44% with a +/- 1 agreement ranging from 79% to 93%.
5. With respect to AA courses, zero of five rubric dimensions exhibit greater than 60% achievement at level '3'. The highest scored dimension is "Documentation of Sources" at 57% scoring '3' or higher.
6. In a study comparing AA courses with online, dual enrollment, and traditional artifacts, the traditional modality exhibits the highest in 0 of 5 dimensions. Concurrent dual enrollment exhibits the highest in 2 of 5. Online exhibits the highest in 3 of 5. Results for 2 of 5 dimensions were statistically significantly different.
7. In a study comparing achievement at 3 or higher across rubric dimensions based on credits earned, achievement lags for those between 16 and 45 credits in all dimensions.
8. In a study comparing achievement at 3 or higher across rubric dimensions based on success rates of students, achievement tends to increase with increasing success rates with some scatter to the data.
9. In a study comparing achievement at 3 or higher based on GPA, achievement increases with increasing GPA in 2 of 5 dimensions but is stable across GPA for the remaining three dimensions.
10. In a longitudinal study, improvement is exhibited in 3 of 5 dimensions from the previous study of the competency in AY 17-18.

A drilldown of 'Analyze' (A) results are as follows:

1. Six of six rubric dimensions exhibit greater than 60% achievement at level '3' with percentages ranging from 64% to 79%.
2. Mean achievement levels for each of the six rubric dimensions range from 2.85 to 3.25 on a 4-point scale.

3. In a study comparing online, dual enrollment (concurrent), and traditional artifacts, the concurrent modality exhibits the highest in 6 of 6 dimensions, although data is limited for this modality at n=13.
4. An inter-rater reliability study exhibits rubric scoring agreement ranging from 12% to 42% with a +/- 1 agreement ranging from 59% to 81%.
5. With respect to AA courses, six of six rubric dimensions exhibit greater than 60% achievement at level '3' with percentages ranging from 63% to 78%.
6. In a study comparing online, dual enrollment, and traditional artifacts, the dual enrollment (concurrent), and traditional artifacts, the concurrent modality exhibits the highest in 6 of 6 dimensions, although data is limited for this modality at n=13.
7. In a study comparing achievement at 3 or higher across rubric dimensions based on credits earned, achievement increases with credits earned in all modalities, although there is a fair bit of scatter in the data in some cases.
8. In a study comparing achievement at 3 or higher across rubric dimensions based on success rates of students, , achievement tends to increase with increasing success rates with some scatter to the data.
9. In a study comparing achievement at 3 or higher based on GPA, achievement increases with increasing GPA in all cases, although minor scatter in two dimension.
10. In a review of scorer feedback, first, scorers noted some distinction issues in interpreting achievement levels. For example, in the "Making Connections" dimension, the difference between a '4' and a '3' is the difference in determining whether an artifact "articulates creatively" versus "articulates." The interpretation is vague and carries bias. And second, very few assignments appear to capture the rubric entirely. This is not necessarily a problem as the assignment should be tied to the competency and not the rubric. At the time of writing, the LAC is already tending to the task of writing a new FSW 'Analyze' rubric based on the findings included in this report.

A drilldown of longitudinal studies are as follows:

1. In a comparison of inter-rater reliability (percentage (%) +/- 1 agreement) averaged across dimensions by each competency in FSW General Education Assessment cycle, both 'Research' and 'Analyze' exhibit results similar to those of past studies (74% and 85% compared with a range of 77% to 90% in past studies).
2. In a comparison of achievement at 3 or higher averaged across dimensions by each competency in FSW General Education Assessment cycle, the 'Research' and 'Analyze' competencies exhibit the 2nd and 4th highest achievement percentages of the past nine assessments, respectively.

A drilldown of professional development plans:

1. To develop a repository of ideal assignments that line up well with rubrics that would be available to FSW faculty may be a good way of alleviating some of the problems noted by scorers. The plan began in AY 2018-2019 and continues in AY 2020-2021.
2. To development assignment building workshops specific to the competency and bring them to departments that are rich in that competency as opposed to housing them at FSW's Teaching and Learning Center (TLC).

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