Analysis of Artifacts aligned to Marshall's Baccalaureate Degree Profile (BDP)

Academic Year 2018 – 2019

Summer Assessment Team Members: Marie Archambault, Cam Brammer, Kim DeTardo-Bora, Robert Ellison, Victor Fet, Marty Laubach, Joan St. Germain, Anita Walz, and Mary Welch

Summer Assessment Support Staff: Mary Beth Reynolds and Chris Sochor

<u>**Executive Summary**</u>

Background

Recommendations from the 2018 Assessment Workgroup (Updates are in red).

Recommendations Concerning the General Process of Assignment Creation and Accurate Alignment to University Outcomes

1. As it did last year, the Assessment Team reiterated the need for instructors to include assignment instructions that clearly specify how their assignments align to the BDP outcomes to which they are tagged. Mary Beth will work with the MU Online Design Center staff to increase the number of faculty including these instructions during academic year 2018-2019. Specific directions as to how to align assignments to specific BDP outcomes <u>and</u> directions regarding how to indicate to which traits within these outcomes the assignment aligns are included in the faculty tab within Blackboard.

2. The Assessment Team recommended that, before beginning the evaluation of artifacts next year, the group take time to review <u>each</u> assignment with artifacts in the sample and collectively determine <u>which</u> outcome traits align to each assignment. Reaching consensus before artifact assessment begins should help to reduce the number of disagreements regarding whether or not individual artifacts align with specific outcome traits. They also recommended that we discuss applications/interpretations of traits among the disciplines, especially context (quantitative), assumptions (critical thinking), ambiguities and risk taking (creative), and data collection (inquiry). This recommendation was not implemented at the beginning of our current assessment cycle. The decision not to implement this practice this year was due, in large part, to the number of assignments and the lack of time devoted to the entire project. We note, also, that we did not assess artifacts aligned to the outcomes assessed in 2018 (Quantitative, Creative, and Inquiry-Based Thinking) this year. However, this is a practice we will consider for summer 2020.

3. The Assessment Team recommended having a discussion prior to scoring about the relevance of assignment instructions to assessors' interpretations of traits, as well as assessors' own assumptions. We decided that, if instructors indicated that an assignment was not aligned to a particular outcome trait, evaluators should indicate that this trait was "not applicable" to the assignment artifacts in their rubric scoring.

4. The Assessment Team recommended that we consider setting up the collections in Blackboard so that instructors can align their assignments with specific traits of an outcome. As noted earlier, there are clear instructions in the faculty tab regarding how to align assignments with outcomes from the university's BDP <u>and</u> how to indicate to which traits of the outcome each assignment aligns.

5. The Assessment Team echoed last year's recommendation that students include process papers with artifact uploads. The Assessment Office and Online Design Center staff will work on a communication strategy to ensure the best strategy for making this happen. Some process papers were included with artifacts this year.

6. Due to lack of time, the Assessment Team will discuss tentative recommendations to more carefully compare results of the paired rubrics used for this year's assessment. Basic findings and questions to be discussed include:

   - Overall, the AAC&U *Quantitative Literacy* Value rubric's traits aligned to more artifacts than did the MU *Quantitative Thinking* rubric. Additionally, using the same artifacts, mean scores were higher on the AAC&U than on the MU rubric. We note that all of the AAC&U rubrics have undergone extensive validation in institutions of higher education across the country.

   - The AAC&U *Creative Thinking* Value rubric was better able to show growth in performance between 100/200 and 300/400 level courses than was the MU *Creative Thinking* rubric. Also, we noted that 50% of artifacts uploaded by students from courses from the College of Arts and Media aligned to *Creative Thinking* were judged by assessors to be misaligned to all traits of the MU rubric, while only 28% were judged to be misaligned to all traits of the AAC&U rubric. Since students in the disciplines of this college produce creative works, we question the applicability of either rubric, but especially MU's *Creative Thinking* rubric to <u>all</u> disciplines within the university.

   - Although both the MU *Inquiry-Based Thinking* rubric and the AAC&U *Critical Thinking* Value rubric showed growth in performance between 100/200 and 300/400 level courses, more artifacts aligned to the traits of the AAC&U rubric than to those of the MU rubric. We note that the MU *Inquiry-Based Thinking* rubric is designed more specifically for scientific research, whereas the AAC&U *Critical Thinking* rubric might be applicable to a wider variety of disciplines. Although the numbers were not large, a greater percentage of FYS artifacts (19%) were judged to be misaligned with all traits of <u>both</u> the MU and AAC&U rubrics, while 11% of Liberal Arts artifacts were judged to be misaligned with all traits of the MU rubric (but only 5% of Liberal arts artifacts to all traits of the AAC&U rubric).

We have not had a more extensive discussion regarding findings from the summer 2018 rubric comparison findings.

Recommendations Concerning the Blackboard Outcomes Assessment Tool

The following items are issues that we will ask Blackboard to address; however, we understand that Blackboard is a large company with many clients and must prioritize improvements to the product. So, while we are hopeful that many of our concerns will be addressed, we realize that addressing them all may take some time.

1. As we have always done, we used an assessment process where each artifact is independently reviewed by two reviewers. Blackboard has not developed an algorithm that will allow each assessor to be randomly paired with each other assessor during this process. Mary Beth will contact Blackboard again about this issue as we feel that the simplistic nature of having each person paired with the same two partners for all evaluations prejudices the objectivity of their evaluations. In other words, it becomes too easy for them to try to anticipate what their partners might think.   Mary Beth followed up with Blackboard regarding our concerns. Although their algorithm for pairing reviewers remains the same, Marshall's Blackboard liaison worked with Mary Beth to develop a system that allowed us this year to ensure that every reviewer was paired with every other reviewer at least once across all rounds of assessment.
2. During the assessment process this year, the use of two rubrics made the time required to assess each artifact longer than last year. It appeared that, for some individuals, Blackboard "timed them out," and did not save their ratings. Mary Beth will contact Blackboard to try to resolve this issue. Mary Beth contacted Blackboard about this issue and was told that there is no time feature with Blackboard Outcomes. The problem did not present itself in a significant manner this year.
3. During our assessment cycle, each assessor's artifact queue disappeared upon completion of scoring. Although we would like to have this issue corrected and Mary Beth will contact Blackboard about it, assessors can get into their queues for later reconciliation as long as they save the email links that Blackboard generates for them at the beginning of the assessment process. We will be sure to emphasize saving these links until the end of the project during future assessment projects. This issue remains, but we have developed a methodology for re-opening the queues, so this is no longer a significant obstacle to our process.
4. Artifacts did not have unique identifiers in the data download. Rather, each student had an anonymized identifier. Since the same students sometimes submit more than one artifact, we would prefer to have unique artifact identifiers. Although we will request the addition of unique artifact identifiers, we were able to identify students with multiple artifacts and create unique identifiers for each of their artifacts. We have determined that anonymized student identifiers work for us. This is true because of the way reviewer scores are downloaded. So, this is no longer a problem for us.

Procedures for 2019 Assessment

General Procedures

In summer 2019 we evaluated student artifacts produced in response to course assignments aligned to *Intercultural Thinking*, to *Ethical and Civic Thinking*, and to *Communication Fluency*.   In May 2019 a group of nine faculty representing several academic colleges from across the university evaluated a sample of these artifacts using Marshall's outcome specific rubrics. These rubrics are included in the supporting documentation. Our sample initially consisted of 324 artifacts, 108 per outcome. However, during scoring raters agreed that 21 artifacts (10 aligned to *Intercultural Thinking*, 10 to *Ethical and Civic Thinking,* and 1 to *Communication Fluency*) were not aligned to the outcomes to which they had been tagged. This reduced the number of usable artifacts to 303 (98 *Intercultural Thinking*, 98 *Ethical and Civic Thinking*, and 107 *Communication Fluency*). Each artifact was read by two independent reviewers (to arrive either at scores or to agreements of nonalignment for specific traits of each outcome). This project was coordinated by the Office of Assessment and Quality Initiatives.

Scoring Procedures

Evaluators assessed each artifact using the following scale:

Special Scoring Codes	
Score	**Explanation**
N/A	In the opinion of the evaluator, the artifact was misaligned with the outcome/trait to which the instructor had tagged it, or the evaluator saw no evidence of the trait in the student's work.
Regular Scoring Codes	
These codes were given to artifacts that, in the opinion of the evaluator, were aligned with appropriate outcomes/traits and contained enough information to allow assessment.	
1	The artifact demonstrated Level 1 performance.
2	The artifact demonstrated Level 2 performance.
3	The artifact demonstrated Level 3 performance.
4	The artifact demonstrated Level 4 performance.

Please see the supporting information that follows this summary for a detailed explanation of scoring procedures.

General Information about the Sample

One hundred seventy-seven (177; 55%) of the artifacts in our sample were drawn from courses at the 100/200 level, with the remaining 147 (45%) drawn from courses at the 300/400 level.

Results and Analysis

One challenge in reporting results of Blackboard assessment is that, although we assessed 324 artifacts (each of which was aligned to one of the BDP outcomes assessed this year), each artifact was analyzed by outcome trait. The total number of traits across the three outcomes was 12 (4 traits for each outcome).   As mentioned previously, 21 artifacts were judged to not be aligned to any trait of the outcome to which they had been tagged. This left 303 scorable artifacts. However, not all artifacts aligned to every trait of the outcomes to which they were tagged.   A perusal of our supporting documentation shows that the artifacts evaluated by the Assessment Team aligned to a total of 957 traits using the MU rubrics (269 for *Intercultural Thinking*, 274 for *Ethical and Civic Thinking*, and 414 for *Communication Fluency*).

Outcome	Trait (MU rubric)	Total Traits Aligned
Intercultural Thinking	Own and Other Cultures	83
	Communication with Others from Different Cultures	65
	Global Awareness	63
	Cultural Conflict	58
Total for Intercultural Thinking		**269**
Ethical and Civic Thinking	Ethical Self-Awareness	71
	Professional Rules and Standards of Conduct	59
	Civic Well-Being	83
	Complex Ethical Issues	61
Total for Ethical and Civic Thinking		**274**
Communication Fluency	Context/Audience	104
	Design/Organization	106
	Diction	101
	Communication Style	103
Total for Communication Fluency		**414**
Totals		**957**

Results based on course level were as follows:

Intercultural Thinking				Ethical and Civic Thinking				Communication Fluency			
Trait	Course Level	Number	Mean (SD)	Trait	Course Level	Number	Mean (SD)	Trait	Course Level	Number	Mean (SD)
Own and Other Cultures	100/200	62	2.27 (0.65)	Ethical Self-Awareness	100/200	7	1.71 (0.70)	Context/Audience	100/200	70	2.62 (0.74)
	300/400	21	2.79 (0.64)		300/400	64	1.84 (0.77)		300/400	34	2.81 (0.65)
Communication with Others from Different Cultures	100/200	46	2.37 (0.68)	Professional Rules and Standards of Conduct	100/200	7	1.93 (0.84)	Design/Organization	100/200	71	2.64 (0.57)
	300/400	19	2.74 (0.69)		300/400	52	2.60 (0.94)		300/400	35	2.86 (0.58)
Global Awareness	100/200	46	2.07 (0.85)	Civic Well-Being	100/200	6	2.25 (0.99)	Diction	100/200	68	2.78 (0.58)
	300/400	17	2.50 (0.73)		300/400	77	2.21 (0.67)		300/400	33	2.86 (0.60)
Cultural Conflict	100/200	39	2.08 (0.85)	Complex Ethical Issues	100/200	14	3.00 (0.76)	Communication Style	100/200	69	2.65 (0.58)
	300/400	19	2.47 (0.82)		300/400	47	2.59 (1.09)		300/400	34	2.71 (0.59)

Communication Fluency and *Ethical and Civic Thinking* means did not differ significantly between 100/200 and 300/400 level courses for any trait on the rubrics. The mean score for the *Intercultural Thinking* trait (own and other cultures) was significantly higher for 300/400 level courses than for 100/200 level courses, while mean scores for the other traits of this outcome did not differ significantly based on course level.

A perusal of the chart above shows mean performance for artifacts uploaded from 100/200 level courses ranged from 1.71 (*Ethical and Civic Thinking*: ethical self-awareness) to 3.0 (*Ethical and Civic Thinking:* complex ethical issues), and for 300/400 level courses from 1.84 (*Ethical and Civic Thinking:* ethical self-awareness) to 2.79 (*Intercultural Thinking:* own and other cultures). We note, however, that there were very few artifacts at the 100/200 level aligned to *Ethical and Civic Thinking*, so a low mean of 2.07 (*Intercultural Thinking*: global awareness to a high of 2.78 (*Communication Fluency*: diction) for 100/200 level courses are probably more accurate numbers to report.

Intercultural Thinking				Ethical and Civic Thinking				Communication Fluency			
Trait	Course Level	Percent Scoring 3.5 or 4.0	Percent Scoring 2.5 to 4.0	Trait	Course Level	Percent Scoring 3.5 or 4.0	Percent Scoring 2.5 to 4.0	Trait	Course Level	Percent Scoring 3.5 or 4.0	Percent Scoring 2.5 to 4.0
Own and Other Cultures	100/200	2%	52%	Ethical Self-Awareness	N/A	3%	33%	Context/Audience	100/200	17%	76%
	300/400	29%	81%						300/400	26%	79%
Communication with Others from Different Cultures	100/200	4%	54%	Professional Rules and Standards of Conduct	N/A	27%	63%	Design/Organization	100/200	11%	87%
	300/400	26%	79%						300/400	31%	82%
Global Awareness	100/200	11%	41%	Civic Well-Being	N/A	8%	41%	Diction	100/200	19%	84%
	300/400	18%	65%						300/400	30%	82%
Cultural Conflict	100/200	8%	41%	Complex Ethical Issues	N/A	41%	67%	Communication Style	100/200	13%	78%
	300/400	21%	63%						300/400	12%	80%
Overall	**100/200**	**6%**	**48%**	**Overall**	**N/A**	**18%**	**49%**	**Overall**	**100/200**	**15%**	**81%**
	300/400	**24%**	**73%**						**300/400**	**25%**	**81%**

Frequency analyses showed that, for *Intercultural Thinking,* 24% of students in 300/400 level courses had scores of 3.5 or 4.0, while only 6% of students in 100/200 level courses had these scores. Forty-nine percent (49%) of the remaining students in 300/400 level courses had scores of either 2.5 or 3.0, while 42% of students enrolled in 100/200 level courses had these scores. So, 73% of students enrolled in 300/400 level courses had scores of 2.5 and above, whereas only 48% of students enrolled in 100/200 level courses had these scores.

For *Communication Fluency*, 25% of students enrolled in 300/400 level courses had scores of 3.5 or 4.0, while only 15% of students enrolled in 100/200 level courses had these scores. Fifty-six percent (56%) of the remaining students in 300/400 level courses had scores of either 2.5 or 3.0, while 66% of students enrolled in 100/200 level courses had these scores. So, for *Communication Fluency*, 81% of students enrolled in both 300/400 and 100/200 level courses scored between 2.5 and 4.0.

There were too few students enrolled in 100/200 level courses to make a course level comparison for *Ethical and Civic Thinking* meaningful. Overall, only 18% of students achieved scores of 3.5 or 4.0, with another 31% achieving scores of 2.5 or 3.0. So, 49% of students achieved scores of 2.5 or greater.

Results for Course Type

Analyzing results by course type posed several challenges. First, the only course type that is unique (i.e. can have only one course type attribute) is First Year Seminar in Critical Thinking (FYS). Courses can have the other attributes (Critical Thinking [CT], Multicultural [MC], International [INT], Writing Intensive [WI], Community-Based Learning [CBL], Core II, and Capstone) in combination (and many do).   So, when analyzing results by course type, we included all courses with the attribute we wanted to assess; this resulted in some courses being included in the analysis for more than one course type. Because there were only seven artifacts from FYS, we did not include this course type in our analysis.

Critical Thinking (CT) Courses

CT courses in the assessment sample included those that aligned to each of the outcomes assessed. However, very few were aligned to *Ethical and Civic Thinking*, so we do not highlight those results here; however, they are included in the supporting documentation following this summary.   We present results for *Intercultural Thinking* and for *Communication Fluency*.   All CT courses are at the 100/200 level. Results are below:

Intercultural Thinking			Communication Fluency		
Trait	Number	Mean Score	**Trait**	Number	Mean Score
Own and Other Cultures	42	2.25	**Context/Audience**	39	2.5
Communication with Others from Different Cultures	27	2.37	**Design/Organization**	38	2.54
Global Awareness	31	2.05	**Diction**	37	2.66
Cultural Conflict	25	1.98	**Communication Style**	38	2.51

While, due to the relatively small /*n/*s, the results should be interpreted with caution, it appears that, overall, students in Marshall's CT courses (which are at the 100 and 200 level) are scoring as would be expected for the university's *Intercultural Thinking* and *Communication Fluency* outcomes.

Core II Courses

Core II courses in the assessment sample included those that aligned to each of the outcomes assessed: *Intercultural Thinking, Ethical and Civic Thinking,* and *Communication Fluency.* However, as all Core II courses are at the 100/200 level, very few aligned with *Ethical and Civic Thinking,* so we do not highlight those results here; however, they are included in the supporting documentation following this summary.   We present results for *Intercultural Thinking* and for *Communication Fluency*.   Results are below:

Intercultural Thinking			Communication Fluency		
Trait	Number	Mean Score	Trait	Number	Mean Score
Owen and Other Cultures	58	2.31	Context/Audience	51	2.57
Communication with Others from Different Cultures	42	2.37	Design/Organization	52	2.61
Global Awareness	44	2.06	Diction	49	2.77
Cultural Conflict	37	2.12	Communication Style	50	2.66

While, due to the relatively small /*n*/s, the results should be interpreted with caution, it appears that, overall, students in Marshall's Core II courses (which are all at the 100 and 200 level) are scoring as would be expected for the university's *Intercultural Thinking* and *Communication Fluency* outcomes.

Writing Intensive (WI) Courses

WI courses in the assessment sample aligned to all outcomes assessed: *Intercultural Thinking, Ethical and Civic Thinking,* and *Communication Fluency.* Results are given below by course level for *Communication Fluency*, but by overall analysis for *Intercultural Thinking* as there were very few WI courses at the 300/400 level that aligned to this outcome. Finally, the number of WI courses that aligned to *Ethical and Civic Thinking* was small, so we do not include that analysis here, but it is included in the supporting documentation that follows this summary.

Intercultural Thinking			Communication Fluency			
Trait	Number	Mean Score	Trait	Course Level	Number	Mean Score
Own and Other Cultures	25	2.32	Context/Audience	100/200	55	2.66
				300/400	31	2.87
2.88Communication with Others from Different Cultures	20	2.6	Design/Organization	100/200	56	2.69
				300/400	71	2.88
Global Awareness	22	2.21	Diction	100/200	54	2.8
				300/400	30	2.88
Cultural Conflict	20	2.33	Communication Style	100/200	55	2.7
				300/400	31	2.71

While, due to the relatively small /*n*/s, the results should be interpreted with caution, it appears that, overall, students in Marshall's WI courses at the 100/200 level are scoring as would be expected in the university's *Intercultural Thinking* and *Communication Fluency* outcomes. Although the trend for performance on *Communication Fluency* in 300/400 level courses is in the right direction (i.e., all means are higher than those for 100/200 level courses, none of these differences is statistically significant. We note, however, that the overall frequency analysis conducted for *Communication Fluency* did show that 25% of all 300/400 level artifacts aligned to this outcome scored between 3.5 and 4.0 (as compared to only 15% of artifacts from 100/200 level courses).

Multicultural (MC) Courses

MC courses in the assessment sample aligned to all outcomes assessed: *Intercultural Thinking, Ethical and Civic Thinking,* and *Communication Fluency.* Results are given below by course level for *Intercultural Thinking*, but by overall analysis for *Communication Fluency* and for *Ethical and Civic Thinking*. There were no MC courses at the 300/400 level aligned to *Ethical and Civic Thinking* and very few were aligned to *Communication Fluency*.   Please see the supporting documentation that follows this summary for additional detail.

Ethical and Civic Thinking			Communication Fluency			Intercultural Thinking			
Trait	Number	Mean Score	Trait	Number	Mean Score	Trait	Course Level	Number	Mean Score
Ethical Self-Awareness	17	2.09	Context/Audience	17	2.5	Own and Other Cultures	100/200	56	2.29
							300/400	16	2.81
Professional Rules and Standards of Conduct	24	2.42	Design/Organization	17	2.62	Communication with Others from Different Cultures	100/200	40	2.35
							300/400	15	2.7
Civic Well-Being	21	2.48	Diction	15	2.77	Global Awareness	100/200	36	1.85
							300/400	13	2.69
Complex Ethical Issues	22	2.41	Communication Style	16	2.66	Cultural Conflict	100/200	29	1.9
							300/400	14	2.5

While, due to the relatively small /*n*/s, the results should be interpreted with caution, it appears that, overall, students in Marshall's MC courses at the 100/200 level are scoring as would be expected for the university's *Intercultural Thinking* outcome. And, for all traits of *Intercultural Thinking*, students in 300/400 level courses had higher mean scores than those in 100/200 level courses.   We note, however, that the overall frequency analysis conducted for *Intercultural Thinking* did show that 24% of all 300/400 level artifacts aligned to this outcome scored between 3.5 and 4.0 (as compared to only 6% of artifacts from 100/200 level courses).

International (INT) Courses

INT courses in the assessment sample aligned to the *Intercultural Thinking* outcome. No artifacts from these courses aligned to *Communication Fluency* and only seven aligned to the complex ethical issues trait of the *Ethical and Civic Thinking outcome*. Indeed, there were very few INT artifacts in the sample. Overall results are given below for *Intercultural Thinking*. Please see the supporting documentation that follows this summary for additional detail.

Intercultural Thinking		
Trait	Number	Mean Score
Own and Other Cultures	5	2.7
Communication with Others from Different Cultures	4	2.5
Global Awareness	13	2.65
Cultural Conflict	12	2.54

We should note that *International Courses* are asked to align artifacts to global awareness and to cultural conflict. The majority of courses were at the 100/200 level; however, the few courses at the 300/400 level that uploaded artifacts scored at lower levels than the 100/200 level courses.

Community Based Learning (CBL) Courses

CBL courses in the assessment sample aligned to *Ethical and Civic Thinking* and most of these courses were at the 300/400 level. Of interest was the comparison between the performance of these courses and those courses that were not designated CBL that aligned to the *Ethical and Civic Thinking* outcome. Please see the supporting documentation that follows this summary for additional detail.

Ethical and Civic Thinking			Ethical and Civic Thinking (Comparison of CBL and non-CBL Courses)			
Trait	Number	Mean Score	Trait	Course Type	Number	Mean Score
Ethical Self-Awareness	25	1.56	**Ethical Self-Awareness**	CBL	25	1.56
				Non-CBL	46	1.97
Professional Rules and Standards of Conduct	9	1.78	**Professional Rules and Standards of Conduct**	CBL	9	1.78
				Non-CBL	50	2.65
Civic Well-Being	27	1.83	**Civic Well-Being**	CBL	27	1.83
				Non-CBL	50	2.39
Complex Ethical Issues	7	2.0	**Complex Ethical Issues**	CBL	7	2.0
				Non-CBL	54	2.77

While, due to the relatively small /*n*/s, the results should be interpreted with caution, it appears that, overall, students in Marshall's CBL courses (which were primarily at the 300/400 level) are scoring between levels 1 and 2 on the rubric we used to assess these artifacts. The Summer Assessment Team noted that Marshall's rubric combines *Ethical* and *Civic Thinking* and it appears that CBL courses are primarily aligned to *Civic*

Thinking. That said, we might need to work with the office that oversees CBL courses to determine if our rubric is appropriate to measure student learning in the area of civic engagement. Of note is that courses that were not designated as CBL (but in some cases had multicultural designations or were capstone courses) outperformed the CBL courses in all traits of the rubric. However, only 18% of artifacts achieved scores of 3.5 or 4.0. We suggest further review of the university's *Ethical and Civic Thinking* rubric.

Capstone Courses

Capstone courses in this assessment sample primarily aligned to *Ethical and Civic Thinking* and all courses were at the 400 level. Please see the supporting documentation that follows this summary for additional detail.

Ethical and Civic Thinking		
Trait	Number	Mean Score
Ethical Self-Awareness	19	2.11
Professional Rules and Standards of Conduct	18	3.25
Civic Well-Being	18	2.69
Complex Ethical Issues	19	2.97

While, due to the relatively small /*n*/s, the results should be interpreted with caution, it appears that, overall, students in Marshall's Capstone courses scored as would be expected, with performance on ethical self-awareness being the weakest among the traits.

Conclusion

We note that we used rubrics this year that measured student performance according to the level of sophistication they demonstrated in achievement of each trait of the three BDP outcomes we assessed. BDP outcomes specify what students are expected to achieve at the time they receive their baccalaureate degrees. With this in mind, we were pleased that 73% of artifacts from 300/400 level courses aligned to *Intercultural Thinking* achieved scores between 2.5 and 4.0, showing that at least one rater had judged these artifacts to be good examples of achievement of the BDP outcomes at either level 3 or 4 of the rubric used.   Likewise, we noted that 81% of artifacts (regardless of course level) aligned to *Communication Fluency* achieved final scores between 2.5 and 4.0. Scores were lower for *Ethical and Civic Thinking*, with only 49% of artifacts (most of which were completed in 300/400 level courses) receiving scores between 2.5 and 4.0.

When investigating *Ethical and Civic Thinking* further, we noted that ethical self-awareness emerged as a relative weakness (*mean* = 1.82; *n* = 71) among the traits of this outcome. Indeed, only 33% of the 71 artifacts received scores between 2.5 and 4.0 (as compared to 41% for civic well-being, 63% for professional rules and standards of conduct, and 67% for complex ethical issues. We recommend that the Assessment Team re-examine the rubric to determine whether the expectations at levels 3 and 4 are realistic and examine the extent to which this outcome trait is addressed in both general education and courses within degree programs. The Office of Assessment and Quality Initiatives will work with faculty

within degree programs to map degree program outcomes to traits of the BDP during academic year 2019-2020. An analysis of these results should help to answer this question.

<div align="center">***Recommendations from the 2019 Assessment Workgroup***</div>

1. Interrater reliability analyses this year showed that the need for reviewers to make judgments regarding which outcome traits instructors had intended their assignments to be aligned resulted in much weaker score agreement than was the case when raters were certain of the instructor's intended trait alignments. For *Intercultural Thinking* and for *Ethical and Civic Thinking* the percentage of rater dyads where one rater gave the artifact a score and the other said it was not aligned to the trait ranged between 19% and 35%. The best way to address this problem is to reiterate to instructors that it is important that they provide assignment instructions that <u>clearly state</u> to which traits of the BDP outcome their assignments align. Currently, directions for doing this are included in the instructor tab within Blackboard. The Summer Assessment Team suggests that the Office of Assessment and Quality Initiatives create an organization within Blackboard to make these instructions more prominent, as well as to feature other important information about aligning assignments to Marshall's BDP and other important outcomes (e.g. capstone, FYS, and baseline). Instructors can also receive emails through the Blackboard organization drawing their attention to these instructions. After discussion in our final meeting we decided that the Online Design Center will work with the Office of Assessment and Quality Initiatives to design a more explicit assignment to outcome trait alignment system that will make more explicit how to align to various traits within an outcome. Specific outcome statements for each trait will be provided for this purpose.
2. An alternative to recommendation #1 is to allow the Summer Assessment Team to evaluate each assignment and arrive at consensus regarding the traits to which it aligns <u>before</u> beginning the assessment process. This recommendation also was made at the end of the summer 2018 assessment process. However, the team believes that recommendation #1 would be preferable, primarily due to the large number of potential assignments to be reviewed and the best use of time during the assessment project.
3. The Summer Assessment Team recommends that results of these assessments be reported to Faculty Senate and to the General Education Council. In reviewing artifacts aligned to *Intercultural Thinking* this year, it became apparent that very few courses with **International** designations aligned assignments to the *Intercultural Thinking* outcome in Blackboard. The Office of Assessment and Quality Initiatives will provide the General Education Council with an inventory of *Multicultural* and *International* courses that are providing uploads aligned to *Intercultural Thinking*.   The Summer Assessment Team recommends that the General Education Council follow-up with Department Chairs regarding this requirement and that, if courses fail to comply, their **Multicultural** or **International** designations be removed.

Supporting Documentation

Baccalaureate Degree Profile Artifact Assessment

Academic Year 2018 – 2019

Outcomes Assessed: MU Rubrics

Outcome	Abbreviation	Traits	Abbreviations
Intercultural Thinking	ICT	Own and Other Cultures	Own & Other
		Communication with Others from Different Cultures	Communication
		Global Awareness	Global Awareness
		Cultural Conflict	Conflict
Ethical and Civic Thinking	ECT	Ethical Self-Awareness	Self-Awareness
		Professional Rules and Standards of Conduct	Rules & Standards
		Civic Well-Being	Civic Well-Being
		Complex Ethical Issues	Issues
Communication Fluency	CF	Context/Audience	Context
		Design/Organization	Design
		Diction	Diction
		Communication Style	Style

Course Types

Course Type	Abbreviation
First Year Seminar in Critical Thinking	FYS
Critical Thinking	CT
Multicultural	MC
International	INT
Writing Intensive	WI
Community Based Learning	CBL
Core II	Core II
Senior Capstone	Capstone

Course Types in ICT, ECT, and CF Outcome Sample
Each Course Counted Separately for Each Category
(i.e. sample *n* does not add to 324)

Course Type	Course Level	Sample *n*	Total Sample *n*
FYS	100-200	7	
	300-400	N/A	7
CT	100-200	117	
	300-400	N/A	117
MC	100-200	80	
	300-400	45	125
INT	100-200	16	
	300-400	5	21
WI	100-200	98	
	300-400	45	143
Core II	100-200	140	
	300-400	N/A	140
CBL	100-200	2	
	300-400	28	30
Senior Capstone	100-200	N/A	
	300-400	29	29
Total	100-200	460	
	300-400	152	**612**

Population/Sample Comparisons for Marshall's Learning Outcomes by Course Level

Marshall Outcomes	Course Level = 100/200			Course Level = 300/400		
	Population	Sample	Percent	Population	Sample	Percent
Intercultural Thinking	935	83	9%	422	25	6%
Ethical and Civic Thinking	81	22	27%	228	86	38%
Communication Fluency	2,049	72	4%	973	36	4%
Total	**3,065**	**177**	**6%**	**1,623**	**147**	**9%**

Sample Frequencies

Total # of artifacts assessed = 108 per outcome

Course Level Frequencies: Intercultural Thinking
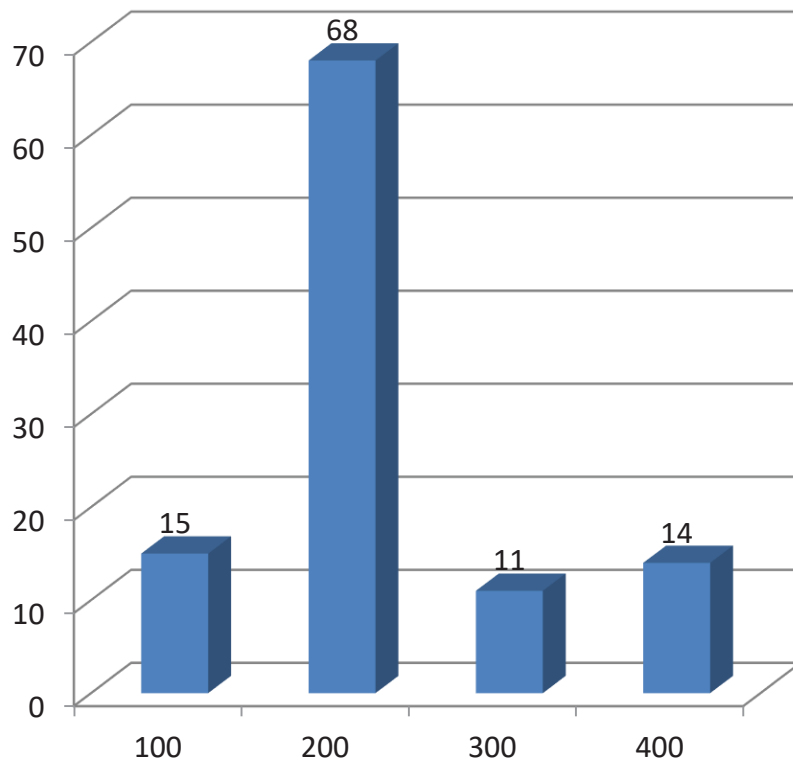
Course Level Frequencies: Ethical and Civic Thinking
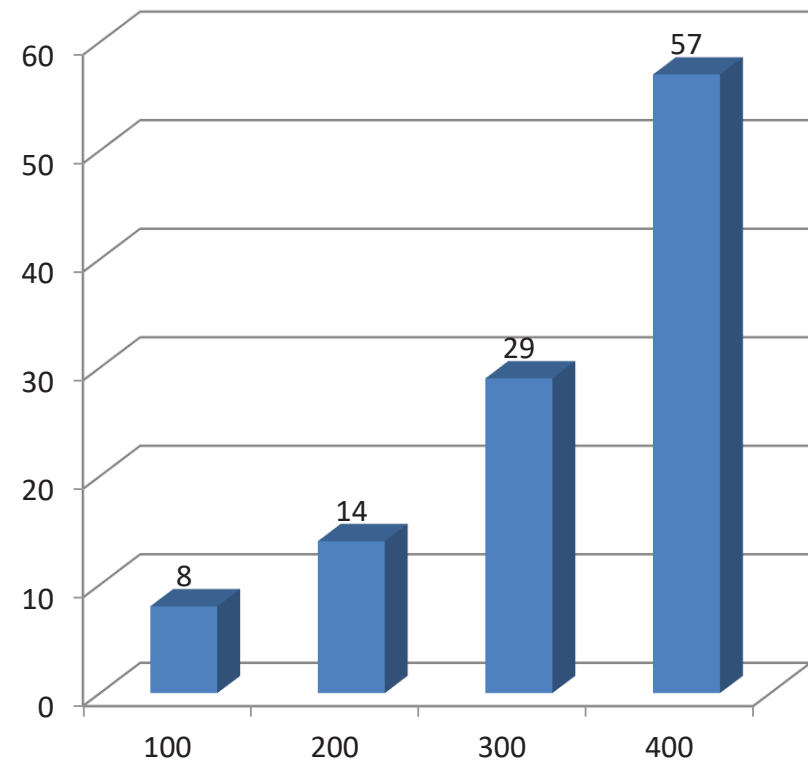
Sample Frequencies

Total # of artifacts assessed = 108 per outcome
Total = 324

Course Level Frequencies: Communication Fluency
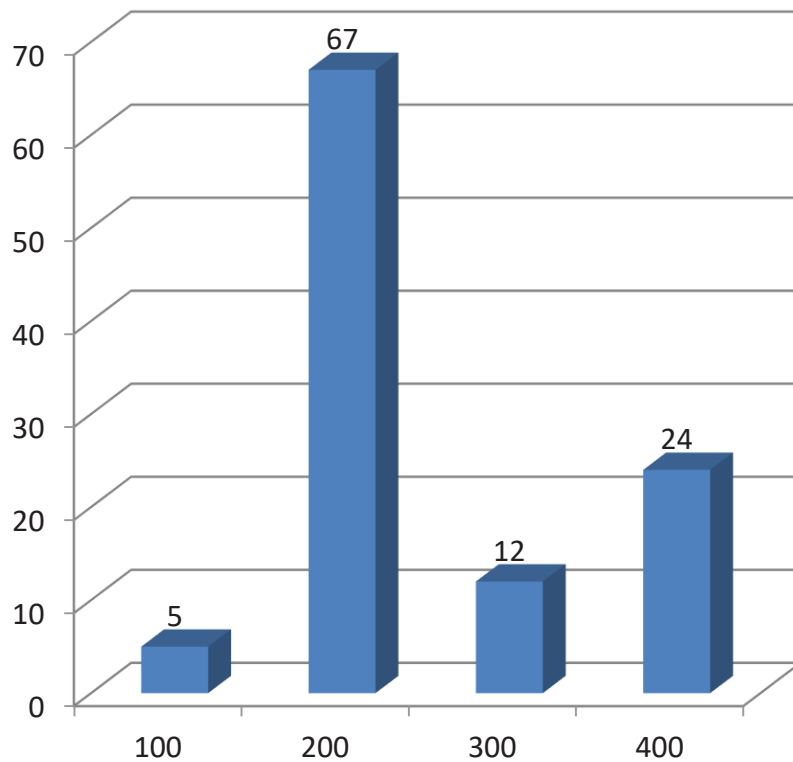
Course Level Frequencies: Total across the three outcomes
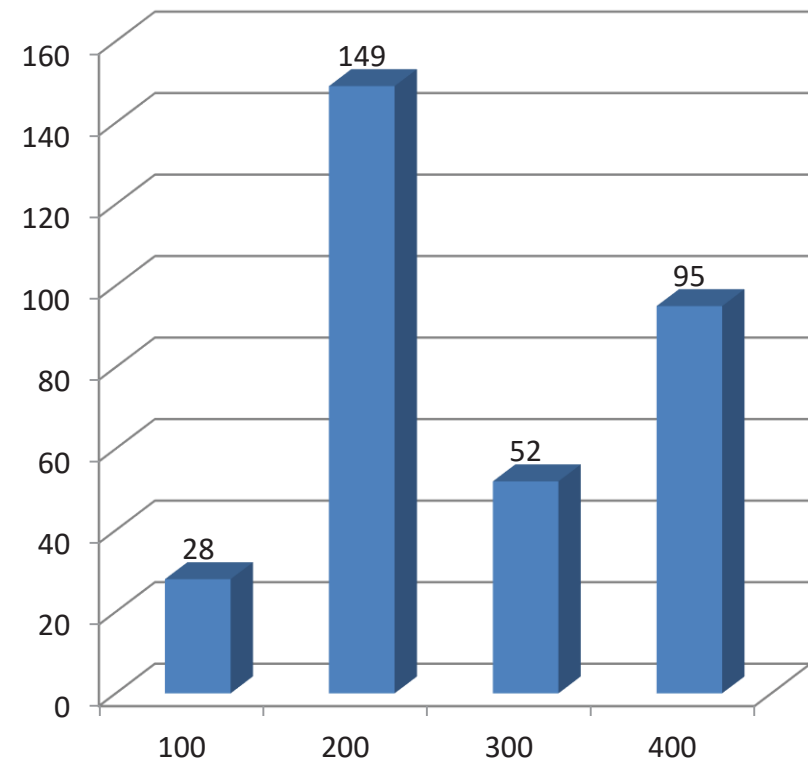
Review Procedures

- Each artifact had two independent raters and usable scores on the 1 – 4 scale were determined in the following manner:
  - If raters assigned the same score, that became the score for the artifact.
  - If raters' scores differed by one point, e.g. Rater 1 assigned a score of 1 and Rater 2 a score of 2, the final score was the mean, i.e. 1.5.
  - If raters' scores differed by more than one point, e.g. Rater 1 assigned a score of 1 and Rater 2 a score of 3, the raters met to discuss the rationale for their scores to see if they could agree on a score or, at minimum, scores that differed by no more than one point.
  - If raters' scores differed by more than one point and, after discussion, they were not able to resolve the differences, a third rater was assigned to review the artifact. (For this review, all raters were able to reconcile disagreements, so third raters were not needed).

Review Procedures

- We also allowed reviewers to assign a score of *N/A (not applicable)* when they did not see evidence of the trait in the artifact or if they were not able to score the artifact due to error (e.g. they were not able to access the artifact). When one rater assigned a score of *N/A* and the second rater assigned a score of 1 – 4, they also met to discuss the rationale for their scores to see if they could agree on the presence (or not) of the trait in the assignment or artifact. If they could not agree, a third reader was assigned. (For this review, all raters were able to come to agreement, so third raters were not needed).

Interrater Reliability

- We conducted interrater reliability analyses using the Cohen's Kappa statistical procedure. In so doing, we used the following rules, similar to those suggested Stellmack, Kohneim-Kalkstein, Manor, Massey, & Schmitz (2009):
  - Since our scoring procedure was to average final scores between two raters when scores differed by only one point, we used that averaged score (e.g. 1.5) as the score for both raters, counting it as an agreement in the interrater reliability analysis.
  - When each evaluator rated an artifact trait as *N/A* (i.e. not aligned to the rubric trait), these ratings were counted as agreements in the interrater reliability analysis.
  - For scores that were two or more points apart, the original score of each reviewer was used in the analysis. Therefore, these scores were counted as disagreements.
  - Any time one rater scored the artifact as *N/A* and another provided a score, the scores were counted as disagreements in the analysis.

Artifacts Excluded from Analysis of Means Due to Inability to Assess or Misalignment with Tagged Outcomes

Outcome	Total Artifacts	Total Artifacts Not Able to be Scored	Total Used for Analysis
Intercultural Thinking	108	10	98
Ethical and Civic Thinking	108	10	98
Communication Fluency	108	1	107
Total	**324**	**21**	**303**

Revised Intercultural Thinking MU Rubric

Intercultural Thinking: Students will **evaluate** generalizations about cultural groups, **analyze** how cultural groups might affect communication across cultures, **evaluate** how specific approaches to global issues will affect multiple cultural communities or political institutions, and **untangle** competing economic, religious, social, political, or geographical interests of cultural groups in conflict.

Traits: Performance Indicators/Performance Levels	N/A	Level 1	Level 2	Level 3	Level 4
Own and Other Cultures: **Evaluate** generalizations about cultural groups.	Cannot assess due to issues with the assignment and/or the artifact.	Uses cultural stereotypes uncritically	Struggles with recognizing and articulating differences between individuals or groups grounded in culture	Accurately recognizes and articulates some differences between individuals or groups factually grounded in culture	Accurately evaluates and explains all differences between individuals or groups factually grounded in culture
Communication with Others from Different Cultures: **Analyze** how cultural groups might affect communication across cultures.	Cannot assess due to issues with the assignment and/or the artifact.	Mentions, but is unable to evaluate and explain how elements of culture (e.g. assumptions) affect forms of communication between individuals and groups	Struggles to evaluate and explain how elements of culture (e.g. assumptions) affect forms of communication between individuals and groups	Evaluates and explains how some elements of culture (e.g. assumptions) affect some forms of communication between individuals and groups	Evaluates and explains how elements of culture (e.g. assumptions) affect all forms of communication between individuals and groups
Global Awareness: Evaluate how specific approaches to global issues will affect multiple cultural communities or political institutions.	Cannot assess due to issues with the assignment and/or the artifact.	Mentions, but is unable to evaluate and explain how specific approaches to global issues have differential impact due to cultural or political interpretations (e.g. interests and values)	Struggles to evaluate and explain how specific approaches to global issues have differential impact due to cultural or political interpretations (e.g. interests and values)	Evaluates and explains how some approaches to global issues have differential impact due to cultural or political interpretations (e.g. interests and values)	Evaluates and explains how specific approaches to global issues have differential impact due to cultural or political interpretations (e.g. interests and values)
Cultural Conflict: Untangle competing economic, religious, social, political, or geographical interests of cultural groups in conflict.	Cannot assess due to issues with the assignment and/or the artifact.	Mentions, but is unable to compare and contrast, some competing economic, religious, social, political, or geographical interests that are at the core of cultural conflict.	Struggles to compare and contrast some competing economic, religious, social, political, or geographical interests that are at the core of cultural conflict.	Compares and contrasts some competing economic, religious, social, political, or geographical interests that are at the core of cultural conflict.	Compares and contrasts the competing economic, religious, social, political, or geographical interests that are at the core of cultural conflict.

Revised Ethical and Civic Thinking MU Rubric

Ethical and Civic Thinking: Students will **determine** the origins of core beliefs and ethical principles, **evaluate** the ethical basis of professional rules and standards of conduct, **evaluate** how academic theories and public policy inform one another to support civic well-being, and **analyze** complex ethical problems to address competing interests.

Traits: Performance Indicators/Performance Levels	N/A	Level 1	Level 2	Level 3	Level 4
Ethical Self-Awareness: **Determine** the origins of core beliefs and ethical principles.	Cannot assess due to issues with the assignment and/or the artifact	Mentions core beliefs or ethical principles but does not indicate origins	Clearly indicates origins of core beliefs or ethical principles	Discusses origins of core beliefs or ethical principles	Thoroughly discusses origins of core beliefs or ethical principles and considers others' perspectives
Professional Rules and Standards of Conduct: **Evaluate** the ethical basis of professional rules and standards of conduct.	Does not consider professional rules or standard of conduct	Mentions professional rules or standards of conduct	Relates ethical basis to professional rules or standards of conduct	Discusses ethical basis of professional rules or standards of conduct and proposes a single solution or approach	Discusses ethical basis of professional rules or standards of conduct and considers alternative solutions or approaches
Civic Well-Being: **Evaluate** how academic theories and public policy inform one another to support civic well-being.	Considers neither academic theories nor public policy	Mentions academic theory or public policy without connecting to civic well-being	Connects either academic theory or public policy to civic well-being	Connects both academic theory and public policy to civic well-being	Thoroughly explains how academic theory and public policy inform one another to support civic well-being
Complex Ethical Issues: **Analyze** complex ethical problems to address competing interests.	Does not consider ethical problems or competing interests	Mentions ethical problems without considering competing interests	Mentions ethical problems while considering competing interests	Discusses ethical problems from the viewpoint of competing interests	Level 3 + Proposes possible approaches or solutions

# Revised Communication Fluency MU Rubric

Communication Fluency: Students will **develop** cohesive oral, written, and visual communications **tailored** to specific audiences.

Traits: Performance Indicators/Performance Levels	N/A	Level 1	Level 2	Level 3	Level 4
Context/Audience: Appraise audience and **tailor** communication with audience needs/culture in mind.	Cannot assess due to issues with the assignment and/or the artifact	Minimal attention to context, audience, purpose, and to the assigned tasks(s).	Awareness of context, audience, purpose, and to the assigned tasks(s). Strategy is evident and somewhat developed.	Adequate consideration of context, audience, purpose, and to the assigned tasks(s). Strategy is mostly developed.	Thorough understanding of context, audience, and purpose that is responsive to the assigned task(s) and focuses all elements of the work. Strategy is fully developed.
Design/Organization: **Fully develop** the design/organization of the communication in a cohesive manner.	Cannot assess due to issues with the assignment and/or the artifact	Little or no attempt to organize the artifact	Some attempt to organize the artifact	The artifact is well organized	The artifact is exceptionally well organized
Diction: With the audience in mind, **choose** a varied vocabulary that conveys the intended meaning of the communication.	Cannot assess due to issues with the assignment and/or the artifact	Language/expression does not satisfy the conventions of the discipline and/or task(s)	Language/expression partially satisfies the conventions of the specific discipline and/or task(s)	Language/expression satisfies the conventions of the specific discipline and/or task(s)	Language/expression is executed at a professional level according to the specific discipline and/or task(s)
Communication Style: **Use** complex and varied sentences, concepts, or visual representations.	Cannot assess due to issues with the assignment and/or the artifact	Uses language/expression that sometimes impedes meaning because of errors in usage	Uses language/expression that generally conveys meaning to readers with clarity, although writing may include some errors	Uses straightforward language/expression that conveys meaning to readers. The language has few errors.	Uses sophisticated language/expression that skillfully communicates meaning to readers with clarity and fluency, and is virtually error free

Intercultural Thinking

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score

(Although there were 98 artifacts in the analysis, not all artifacts aligned to every trait)

Overall Analysis

■ Own & Other; n = 83　■ Communication; n = 65　■ Global Awareness; n = 63　■ Conflict; n = 58
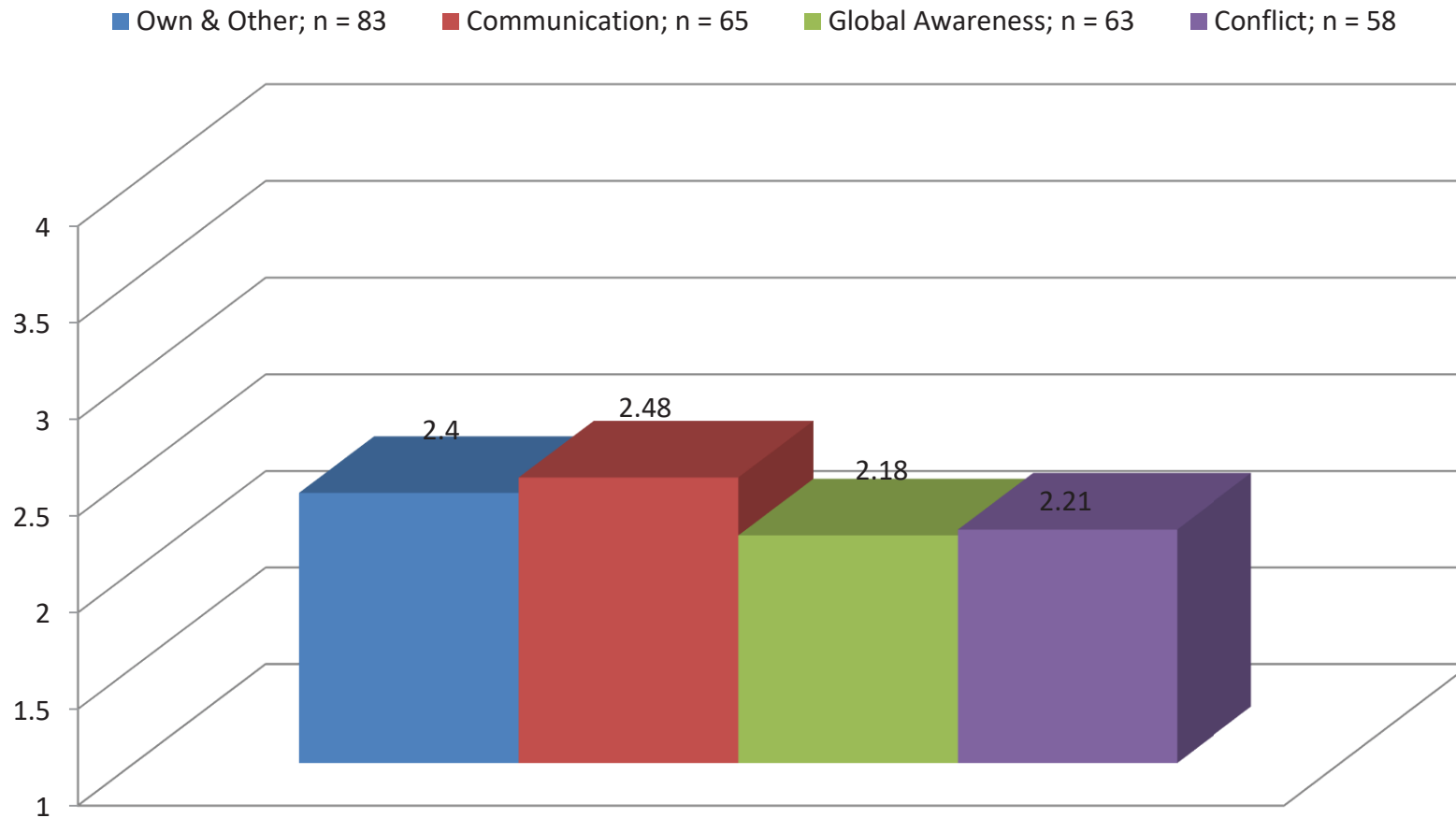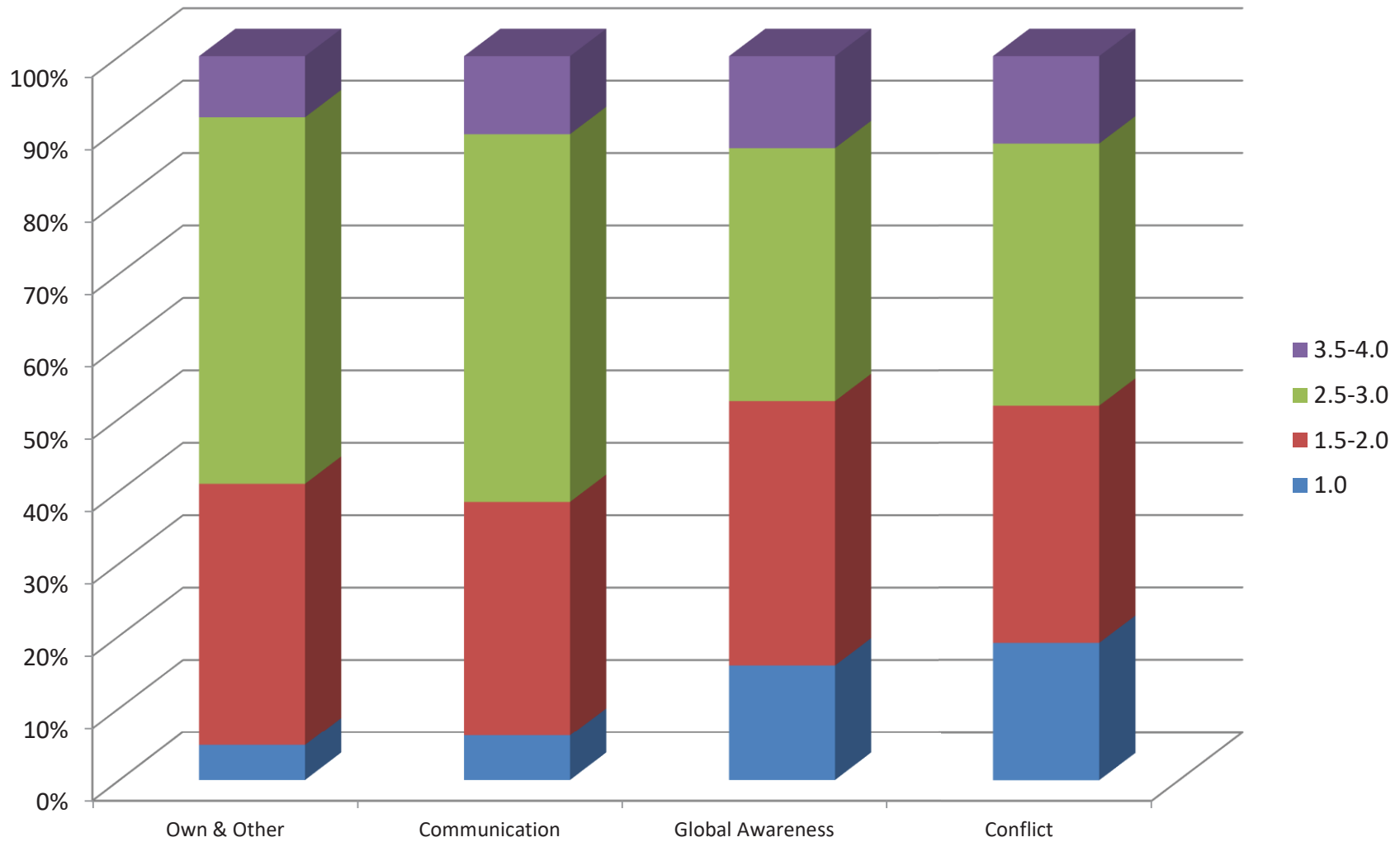
Intercultural Thinking

Frequency Analysis

Number of artifacts (with usable scores) scoring at each performance level

Trait/ Performance Level	Own & Other	Communication	Global Awareness	Conflict	Total
1.0	4 (5%)	4 (6%)	10 (16%)	11 (19%)	29 (11%)
1.5 – 2.0	30 (36%)	21 (32%)	23 (37%)	19 (33%)	93 (35%)
2.5 – 3.0	42 (51%)	33 (51%)	22 (35%)	21 (36%)	118 (44%)
3.5 – 4.0	7 (8%)	7 (11%)	8 (13%)	7 (12%)	29 (11%)
Total Tags with Usable Scores	**83 (100%)**	**65 (100%)**	**63 (100%)**	**58 (100%)**	**269 (100%)**

Intercultural Thinking

Frequency Analysis

Legend:
- 3.5-4.0
- 2.5-3.0
- 1.5-2.0
- 1.0

Categories: Own & Other, Communication, Global Awareness, Conflict

Intercultural Thinking

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score
Mean difference for *Own & Other* was significant at the course level; differences for the other three traits were not significant.
Overall means for Intercultural Thinking were 2.21 for 100/200 and 2.63 for 300/400 level courses.
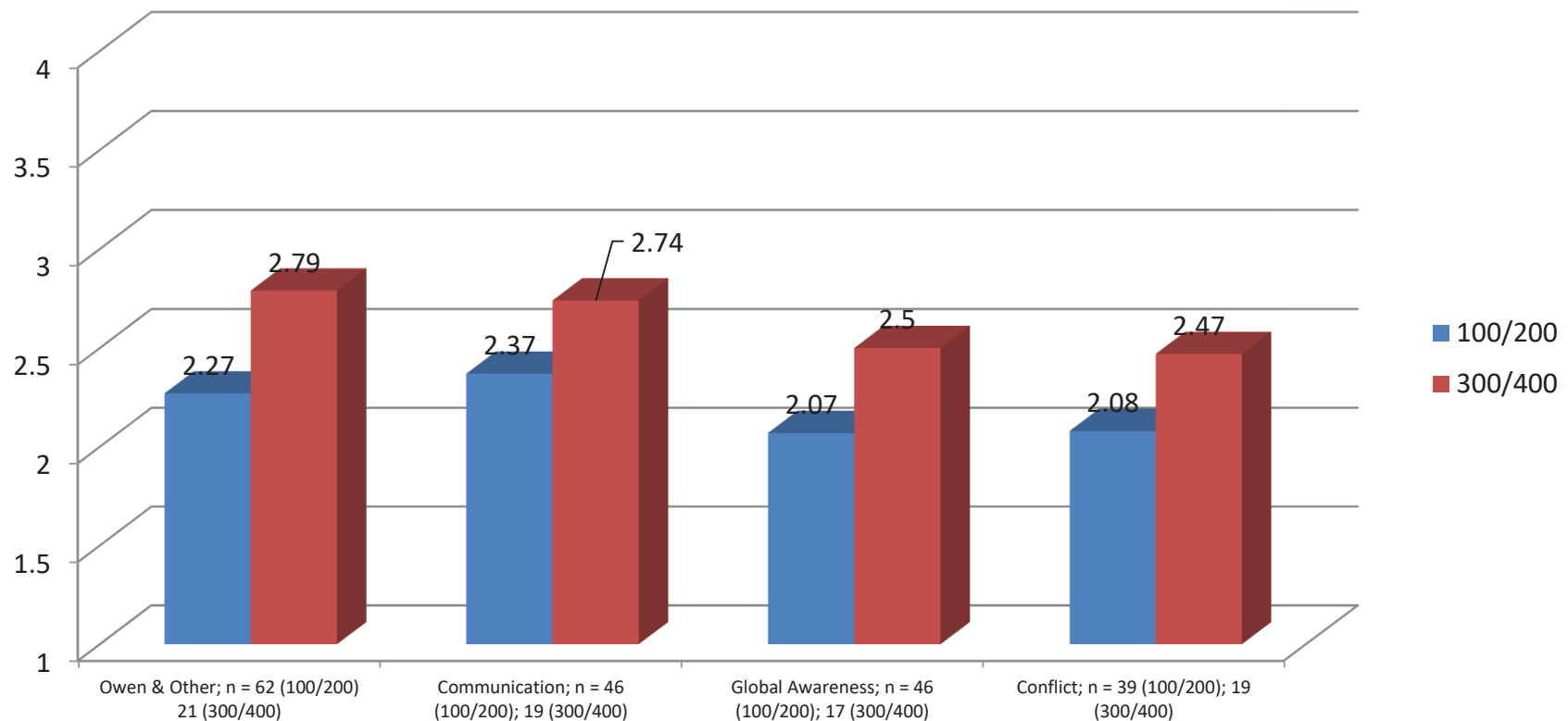
Course Level Analysis

Intercultural Thinking

Frequency Analysis by Course Level

Number of artifacts (with usable scores) scoring at each performance level

Course Level	Trait/ Performance Level	Own & Other	Communication	Global Awareness	Conflict	Total
100/200	1.0	4 (6%)	4 (9%)	10 (22%)	9 (23%)	27 (14%)
300/400		0	0	0	2 (11%)	2 (3%)
100/200	1.5 – 2.0	26 (42%)	17 (37%)	17 (37%)	14 (36%)	74 (38%)
300/400		4 (19%)	4 (21%)	6 (35%)	5 (26%)	19 (25%)
100/200	2.5 – 3.0	31 (50%)	23 (50%)	14 (30%)	13 (33%)	81 (42%)
300/400		11 (52%)	10 (53%)	8 (47%)	8 (42%)	37 (49%)
100/200	3.5 – 4.0	1 (2%)	2 (4%)	5 (11%)	3 (8%)	11 (6%)
300/400		6 (29%)	5 (26%)	3 (18%)	4 (21%)	18 (24%)
100/200	Total Tags with Usable Scores	62 (100%)	46 (100%)	46 (100%)	39 (1200%)	193 (100%)
300/400		21 (100%	19 (100%)	17 (100%)	19 (100%)	76 (100%)
All Course Levels	Grand Totals	83	65	63	58	269

Intercultural Thinking

Frequency Analysis by Course Level

Own & Other

Communication

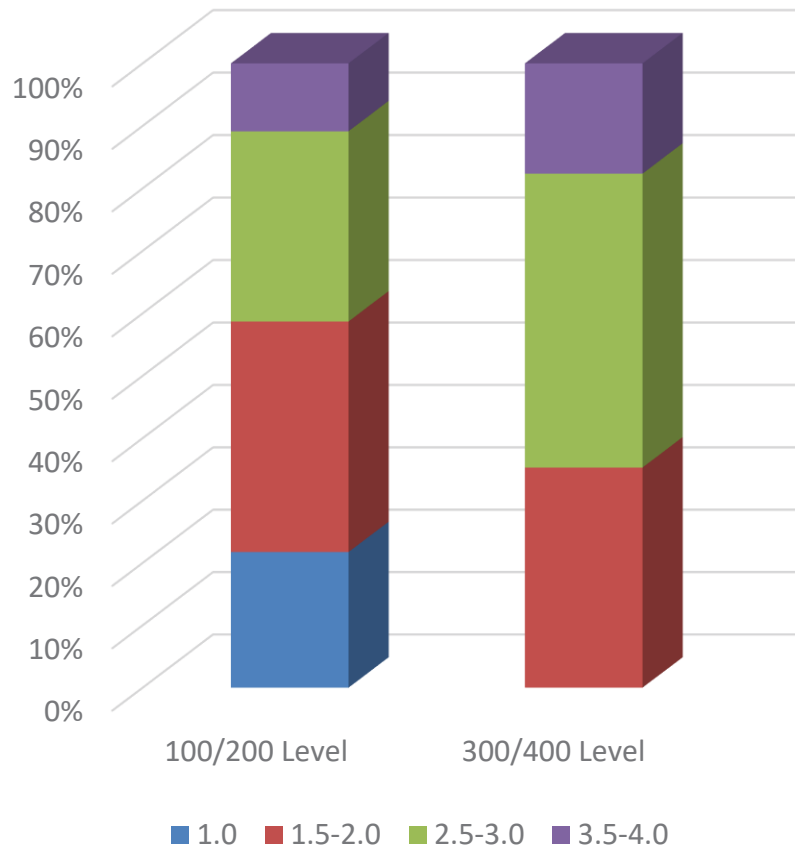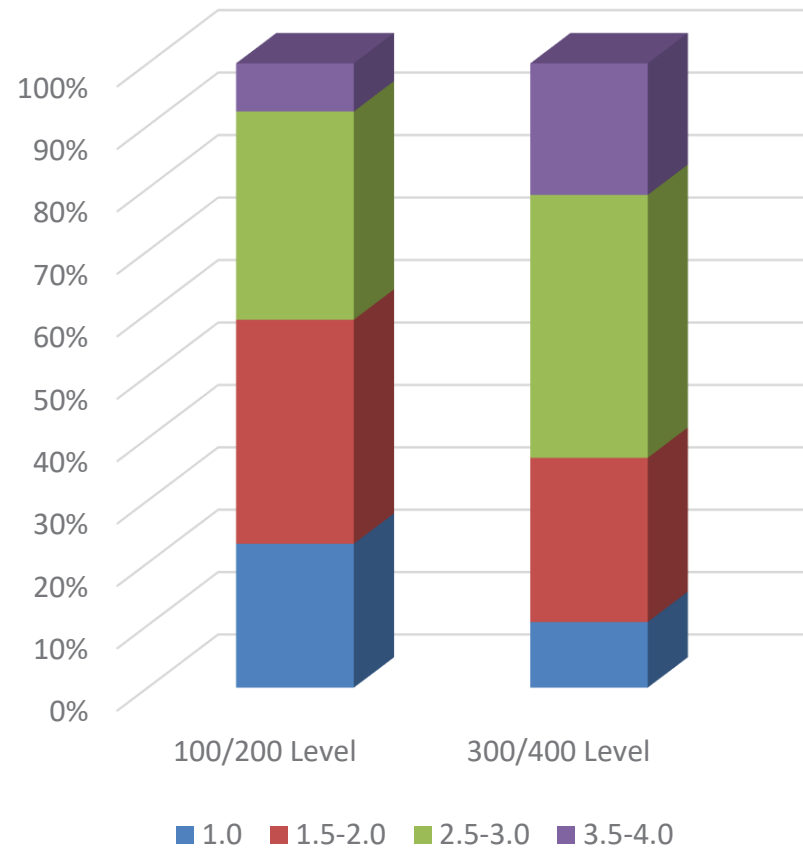Legend (both charts): ■ 1.0 ■ 1.5-2.0 ■ 2.5-3.0 ■ 3.5-4.0
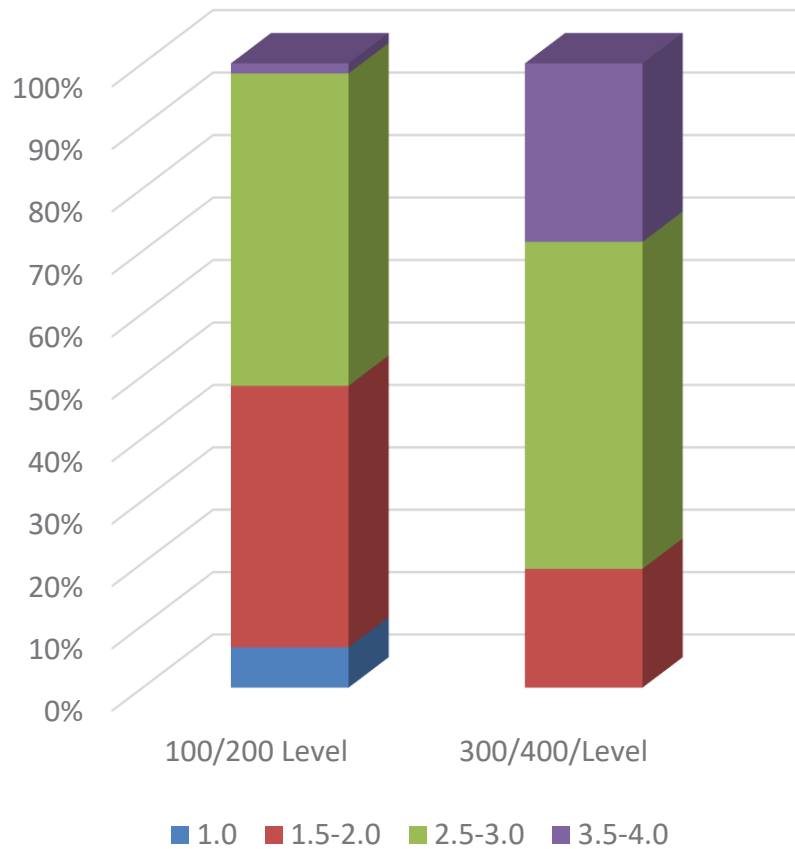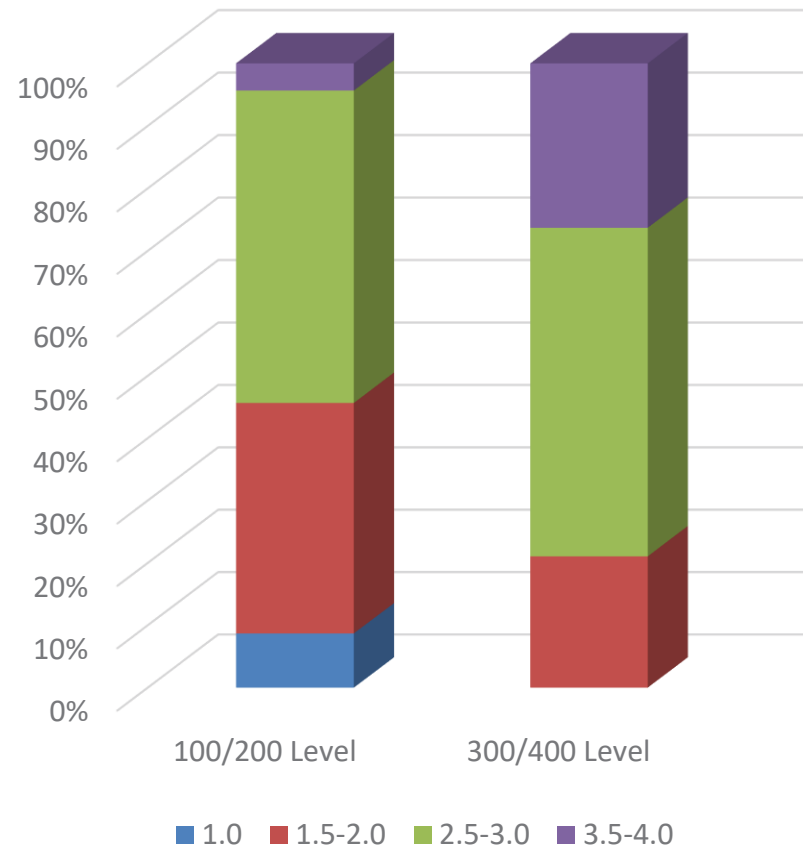
Intercultural Thinking

Frequency Analysis by Course Level

Global Awareness

Conflict

# Intercultural Thinking

Inter-Rater Agreement Results

Trait/ Performance Level	Own & Other Kappa Liberal = .566	Communication Kappa Liberal = .634	Global Awareness Kappa Liberal = .621	Conflict Kappa Liberal = .546
Agree on score	25 (23%)	24 (22%)	14 (13%)	18 (17%)
Difference = 1 point	30 (28%)	20 (19%)	27 (25%)	19 (18%)
Difference = 2 points	7 (6%)	8 (7%)	10 (9%)	6 (6%)
Difference = 3 points	1 (1%)	2 (2%)	0	0
Agree on Not Aligned or Unable to Score Due to Error	15 (14%)	34 (31%)	36 (33%)	35 (32%)
Score + Not Aligned	30 (28%)	20 (19%)	21 (19%)	30 (28%)
Total	108 (100 %)	108 (100%)	108 (100%)	108

Ethical and Civic Thinking

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score.

(Although there were 98 artifacts in the analysis, not all artifacts aligned to every trait)

Overall Analysis

■ Self-Awareness (n = 71) ■ Rules & Standards (n = 59) ■ Civic Well-Being (n = 83) ■ Issues (n = 61)
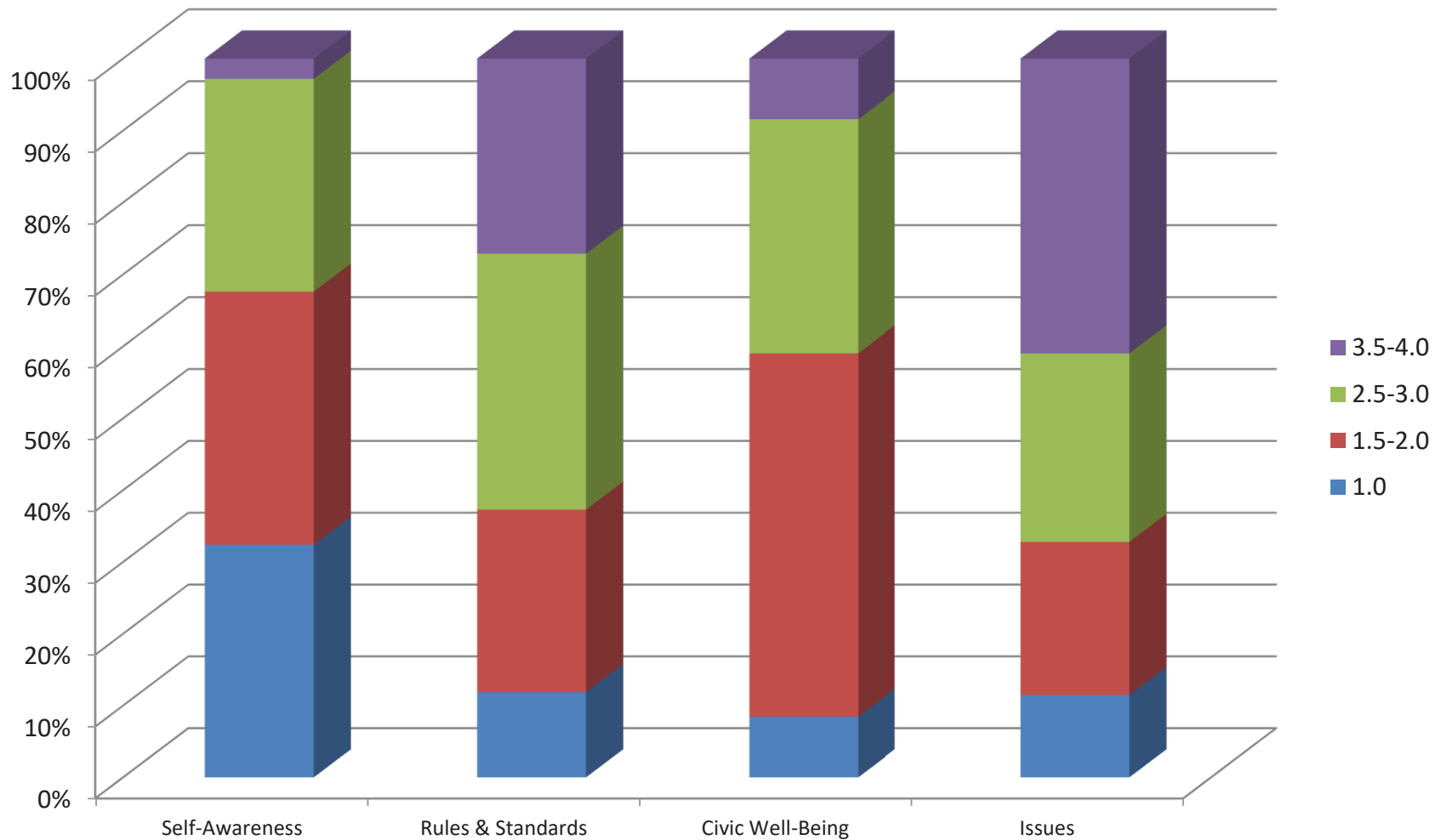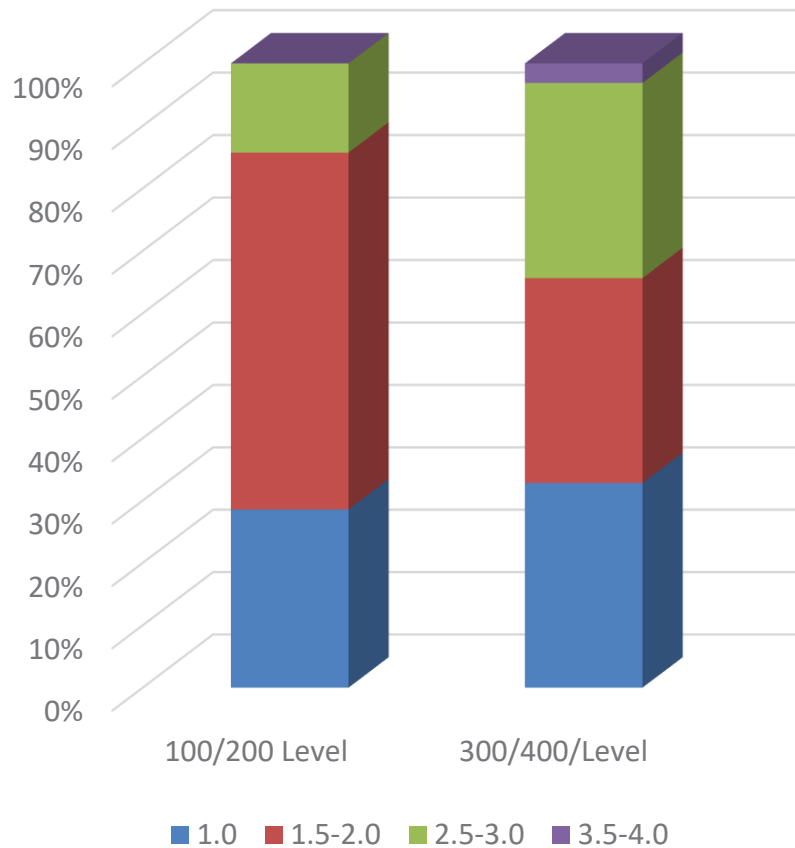

1.82 2.52 2.21 2.68
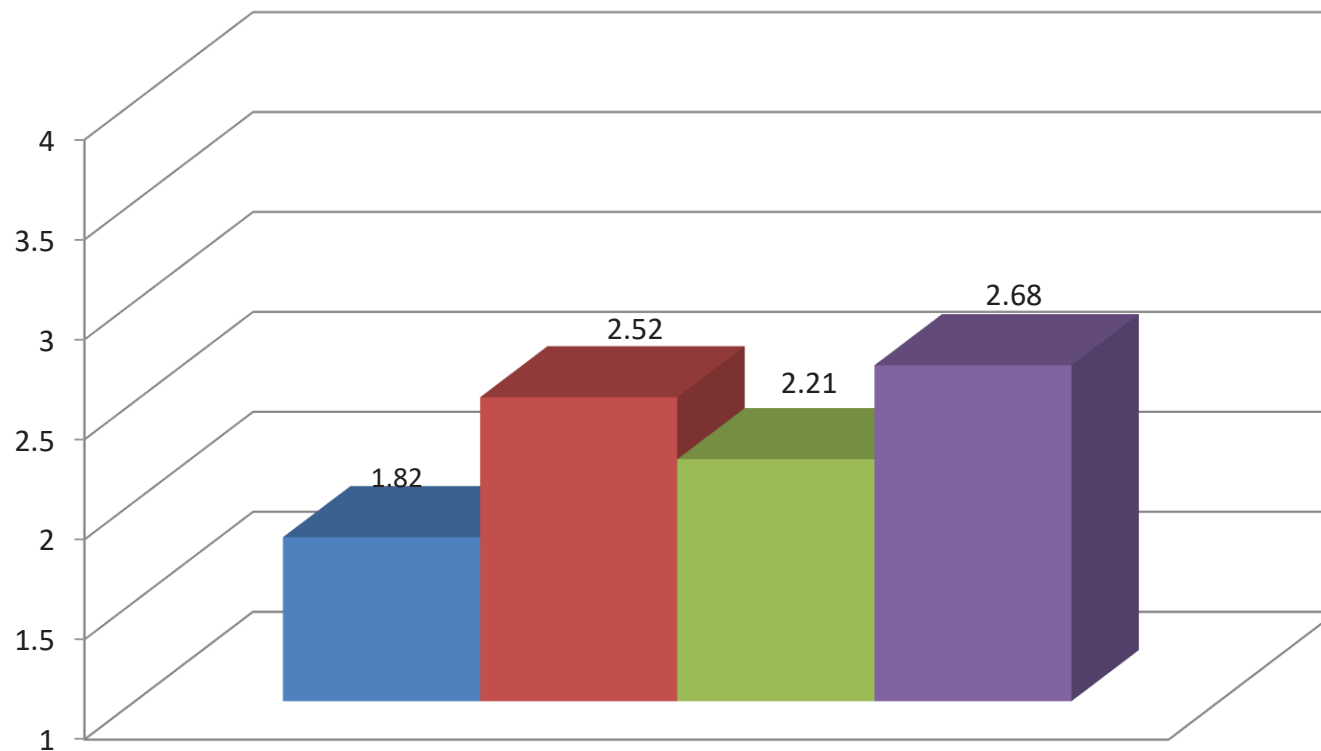
Ethical and Civic Thinking

Number of artifacts (with usable scores) scoring at each performance level

Trait/ Performance Level	Self-Awareness	Rules & Standards	Civic Well-Being	Issues	Total
1.0	23 (32%)	7 (12%)	7 (8%)	7 (11%)	**44 (16%)**
1.5 – 2.0	25 (35%)	15 (25%)	42 (51%)	13 (21%)	**95 (35%)**
2.5 – 3.0	21 (30%)	21 (36%)	27 (33%)	16 (26%)	**85 (31%)**
3.5 – 4.0	2 (3%)	16 (27%)	7 (8%)	25 (41%)	**50 (18%)**
Totals	**71**	**59**	**83**	**61**	**274**

Ethical and Civic Thinking

Frequency Analysis

Legend:
- 3.5-4.0
- 2.5-3.0
- 1.5-2.0
- 1.0

Categories: Self-Awareness, Rules & Standards, Civic Well-Being, Issues

Y-axis: 0% to 100%

Ethical and Civic Thinking: Course Level Analysis

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score
There were no significant mean differences based on course level for any trait.
Overall means for Ethical and Civic Thinking were 2.38 for 100/200 level courses and 2.27 for 300/400 level courses.
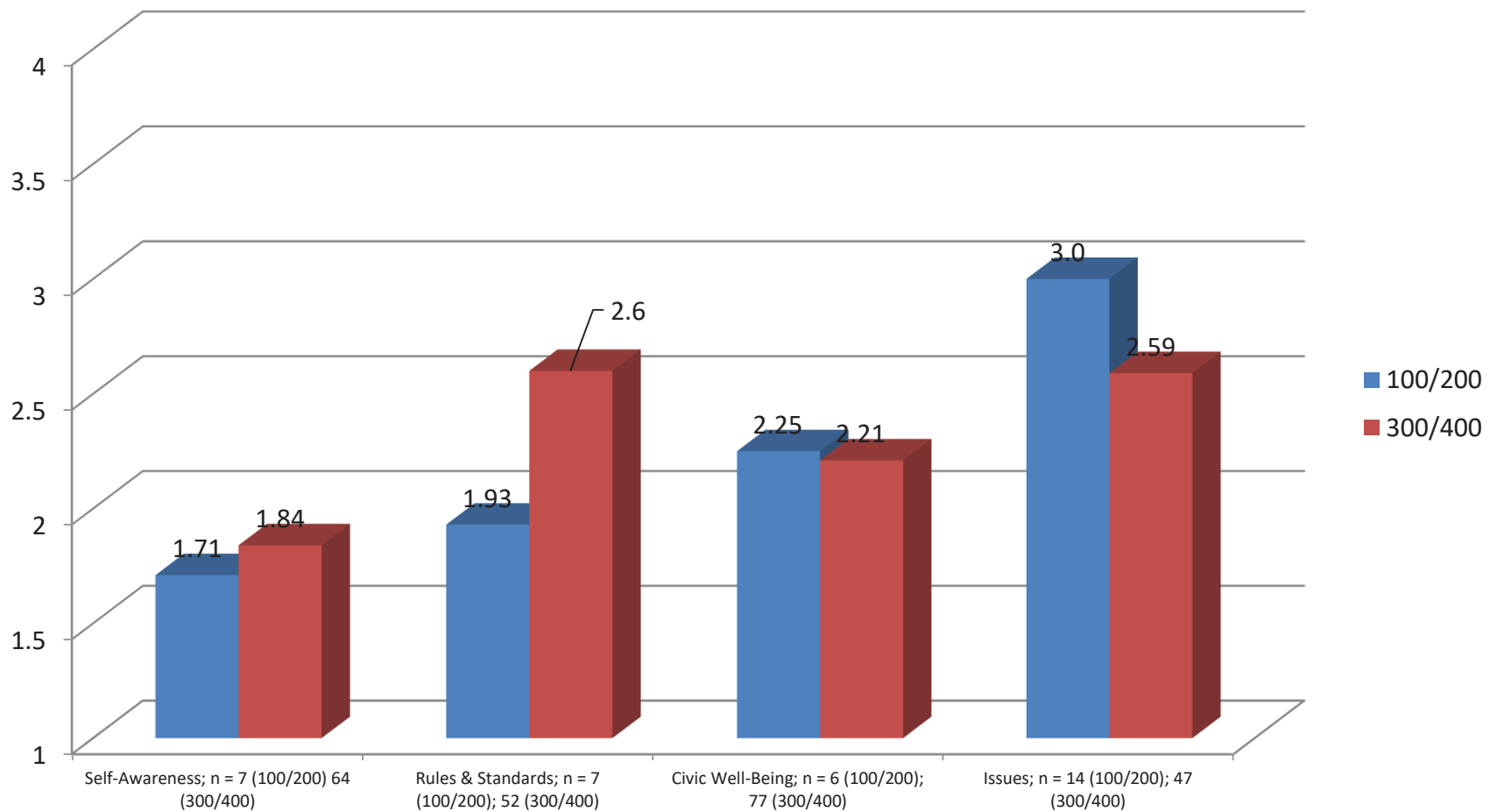
Course Level Analysis

Chart data:

Trait	100/200	300/400
Self-Awareness; n = 7 (100/200) 64 (300/400)	1.71	1.84
Rules & Standards; n = 7 (100/200); 52 (300/400)	1.93	2.6
Civic Well-Being; n = 6 (100/200); 77 (300/400)	2.25	2.21
Issues; n = 14 (100/200); 47 (300/400)	3.0	2.59

Ethical and Civic Thinking

Frequency Analysis by Course Level

Number of artifacts (with usable scores) scoring at each performance level

Course Level	Trait/ Performance Level	Self-Awareness	Rules & Standards	Civic Well-Being	Issues	Total
100/200	1.0	2 (29%)	1 (14%)	1 (17%)	0	4 (12%)
300/400		21 (33%)	6 (12%)	6 (8%)	7 (15%)	40 (17%)
100/200	1.5 – 2.0	4 (57%)	4 (57%)	3 (50%)	2 (14%)	13 (38%)
300/400		21 (33%)	11 (21%)	39 (51%)	11 (23%)	82 (34%)
100/200	2.5 – 3.0	1 (14%)	1 (14%)	1 (17%)	5 (36%)	8 (24%)
300/400		20 (31%)	20 (38%)	26 (34%)	11 (23%)	77 (32%)
100/200	3.5 – 4.0	0	1 (14%)	1 (17%)	7 (50%)	9 (26%)
300/400		2 (3%)	15 (29%)	6 (8%)	18 (38%)	41 (17%)
100/200	Total Tags with Usable Scores	7 (100%)	7 (100%)	6 (100%)	14 (100%)	34 (100%)
300/400		64 (100%)	52 (100%)	77 (100%)	47 (100%)	240 (100%)
All Course Levels	Grand Totals	71	59	83	61	274

Ethical and Civic Thinking

Frequency Analysis by Course Level

Self-Awareness

Rules & Standards

Legend: ■ 1.0 ■ 1.5-2.0 ■ 2.5-3.0 ■ 3.5-4.0
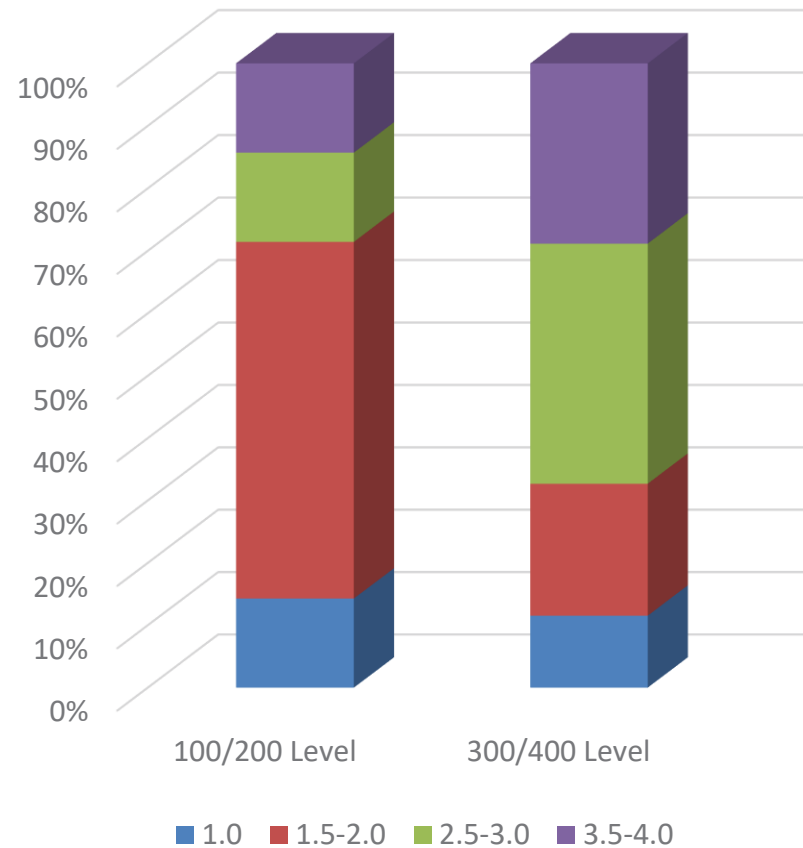
Ethical and Civic Thinking

Frequency Analysis by Course Level

Civic Well-Being

	100/200 Level	300/400/Level

Issues

	100/200 Level	300/400 Level

■ 1.0　■ 1.5-2.0　■ 2.5-3.0　■ 3.5-4.0
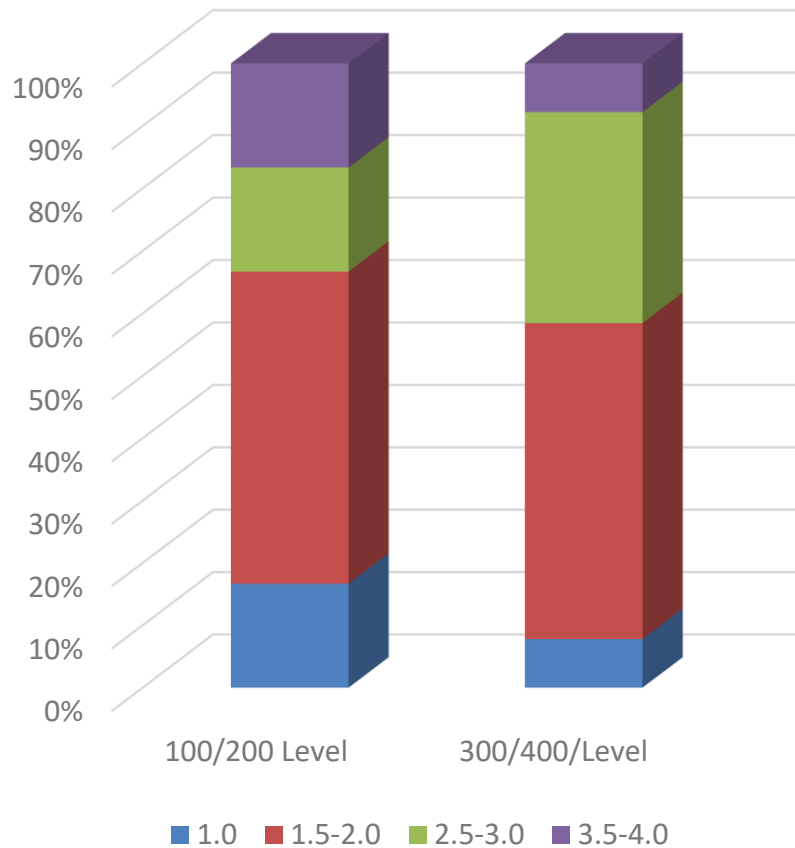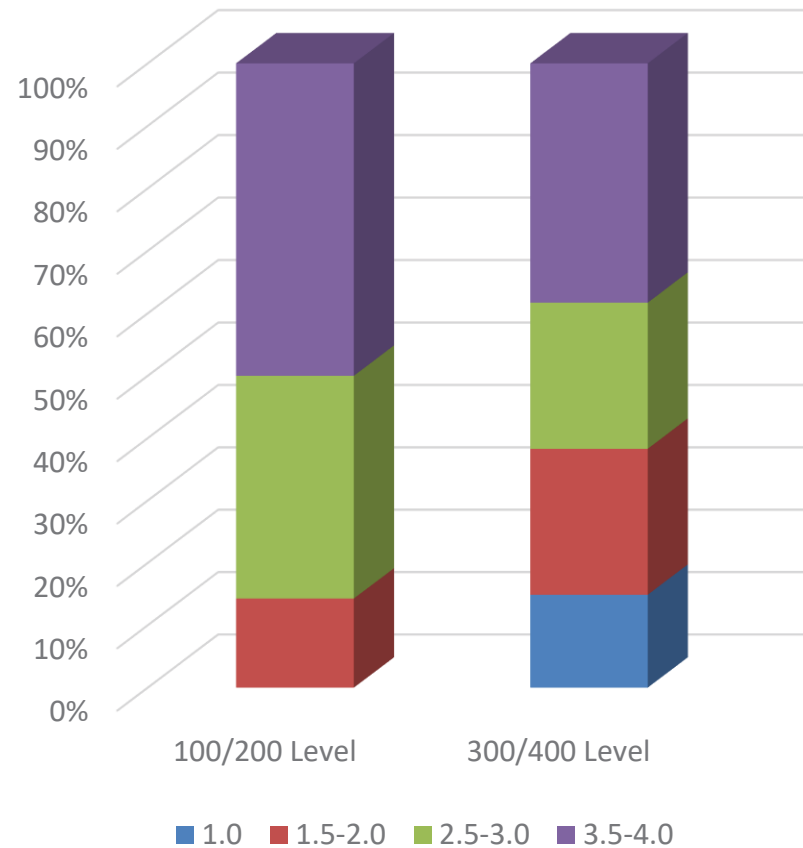
Ethical and Civic Thinking
Inter-Rater Agreement Results

Trait/ Performance Level	Self-Awareness Kappa Liberal = .348	Rules & Standards Kappa Liberal = .354	Civic Well-Being Kappa Liberal = .495	Issues Kappa Liberal = .409
Agree on score	25 (23%)	8 (7%)	32 (30%)	8 (7%)
Difference = 1 point	12 (11%)	15 (14%)	23 (21%)	20 (19%)
Difference = 2 points	14 (13%)	15 (14%)	12 (11%)	17 (16%)
Difference = 3 points	3 (3%)	5 (5%)	6 (6%)	3 (3%)
Agree on Not Aligned or Unable to Score Due to Error	16 (15%)	33 (31%)	8 (7%)	31 (29%)
Score + Not Aligned	38 (35%)	32 (30%)	27 (25%)	29 (27%)
Total	108 (100%)	108 (100%)	108 (100%)	108 (100%)

Communication Fluency

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score

(Although there were 107 artifacts in the analysis, not all artifacts aligned to every trait)

Overall Analysis

■ Context; n = 104　　■ Design; n = 106　　■ Diction; n = 101　　■ Style; n = 103

2.68　　2.71　　2.81　　2.67
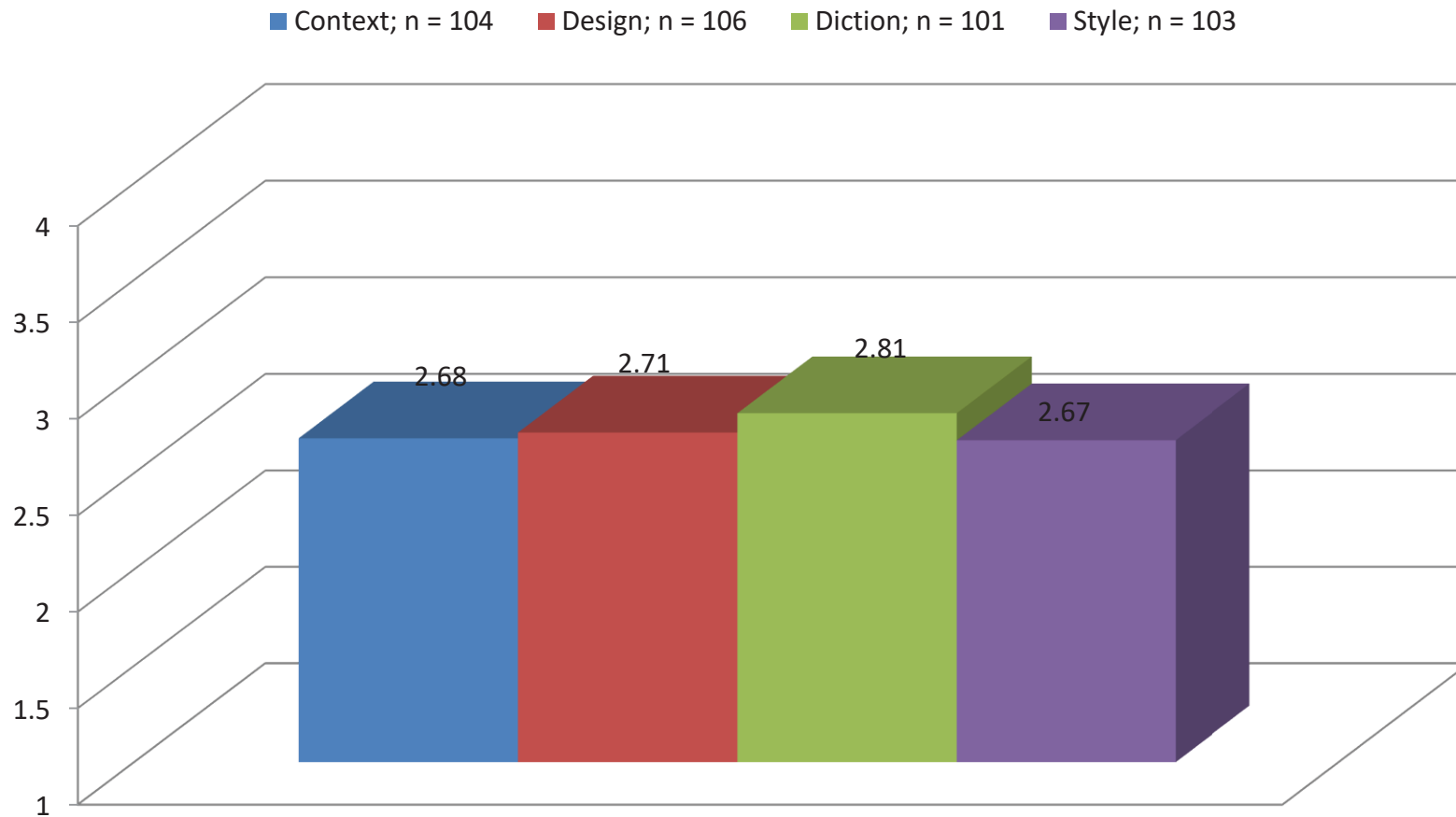
Communication Fluency

Number of artifacts (with usable scores) scoring at each performance level

Trait/ Performance Level	Context	Design	Diction	Style	Total
1.0	4 (4%)	3 (3%)	1 (1%)	1 (1%)	9 (2%)
1.5 – 2.0	20 (19%)	13 (12%)	16 (16%)	21 (20%)	70 (17%)
2.5 – 3.0	59 (57%)	71 (67%)	61 (60%)	68 (66%)	259 (63%)
3.5 – 4.0	21 (20%)	19 (18%)	23 (23%)	13 (13%)	76 (18%)
Totals	**104 (100%)**	**106 (100%)**	**101 (100%)**	**103 (100%)**	**414 (100%)**

Communication Fluency
Frequency Analysis
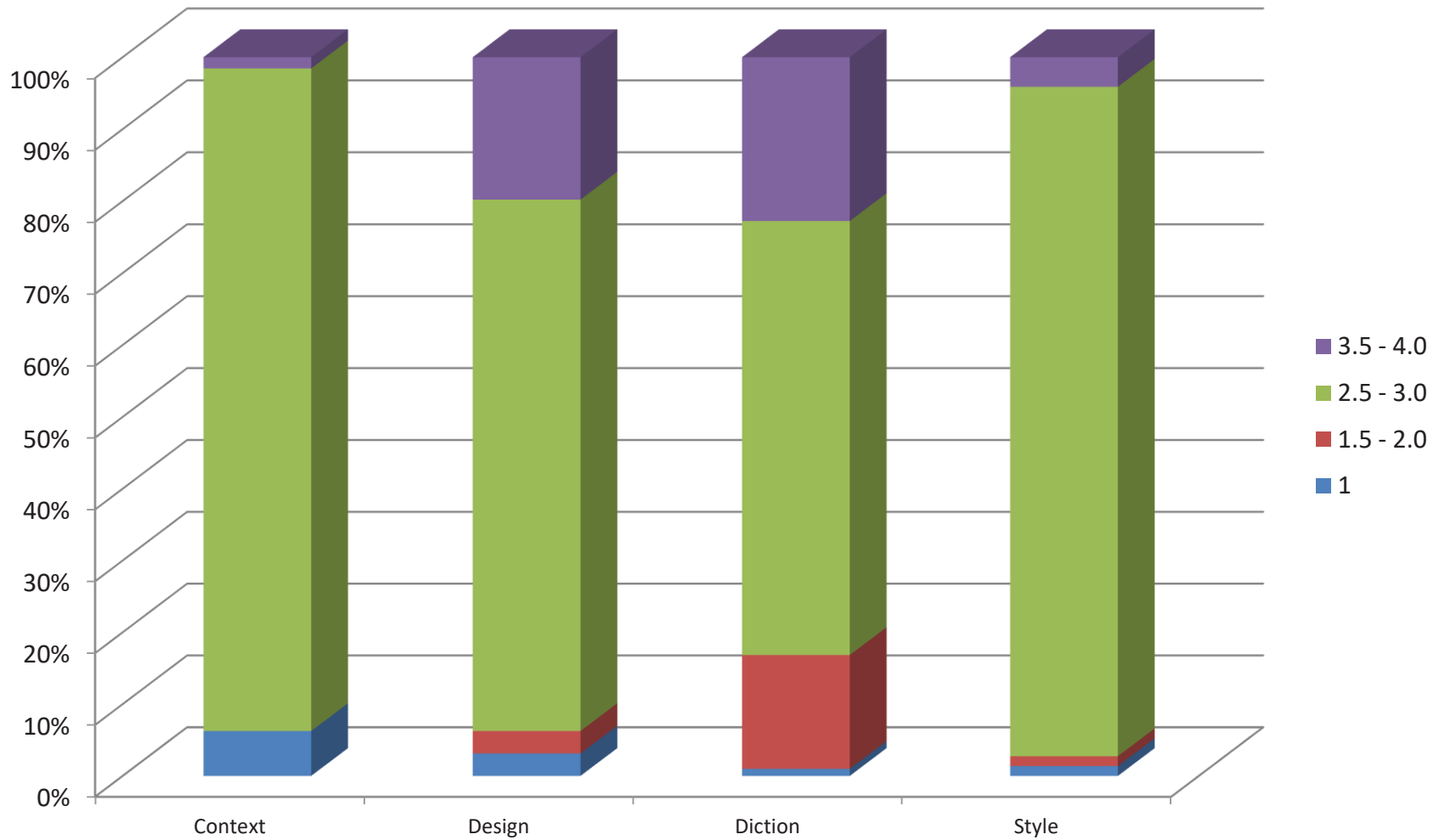
Legend:
- 3.5 - 4.0
- 2.5 - 3.0
- 1.5 - 2.0
- 1

Categories: Context, Design, Diction, Style

Communication Fluency

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score

There were no significant differences based on course level for any trait.

Overall means for Communication Fluency were 2.67 for 100/200 level courses and 2.81 for 300/400 level courses.
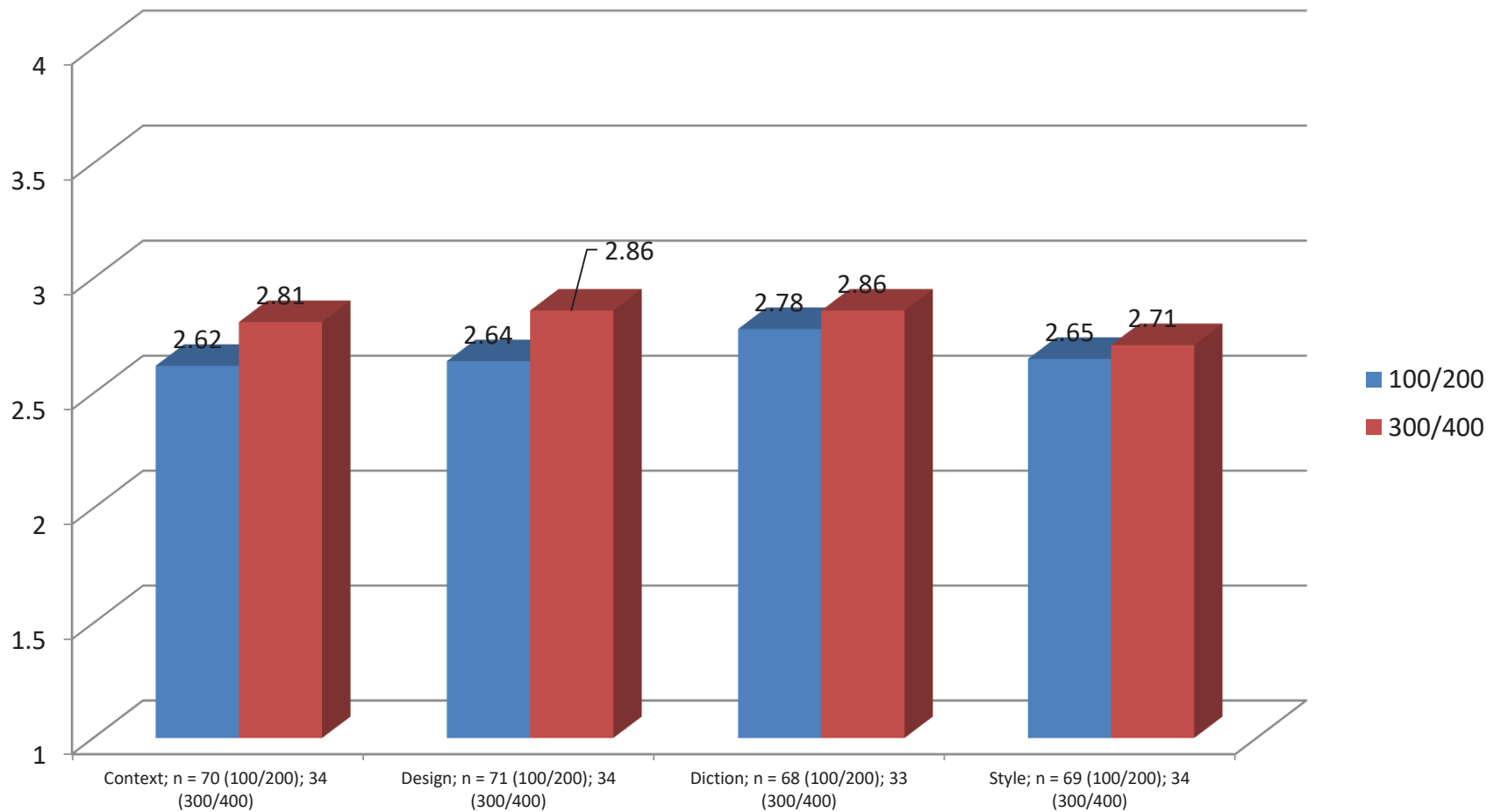
Course Level Analysis

Chart data:

Trait	100/200	300/400
Context; n = 70 (100/200); 34 (300/400)	2.62	2.81
Design; n = 71 (100/200); 34 (300/400)	2.64	2.86
Diction; n = 68 (100/200); 33 (300/400)	2.78	2.86
Style; n = 69 (100/200); 34 (300/400)	2.65	2.71

Communication Fluency

Frequency Analysis by Course Level

Number of artifacts (with usable scores) scoring at each performance level

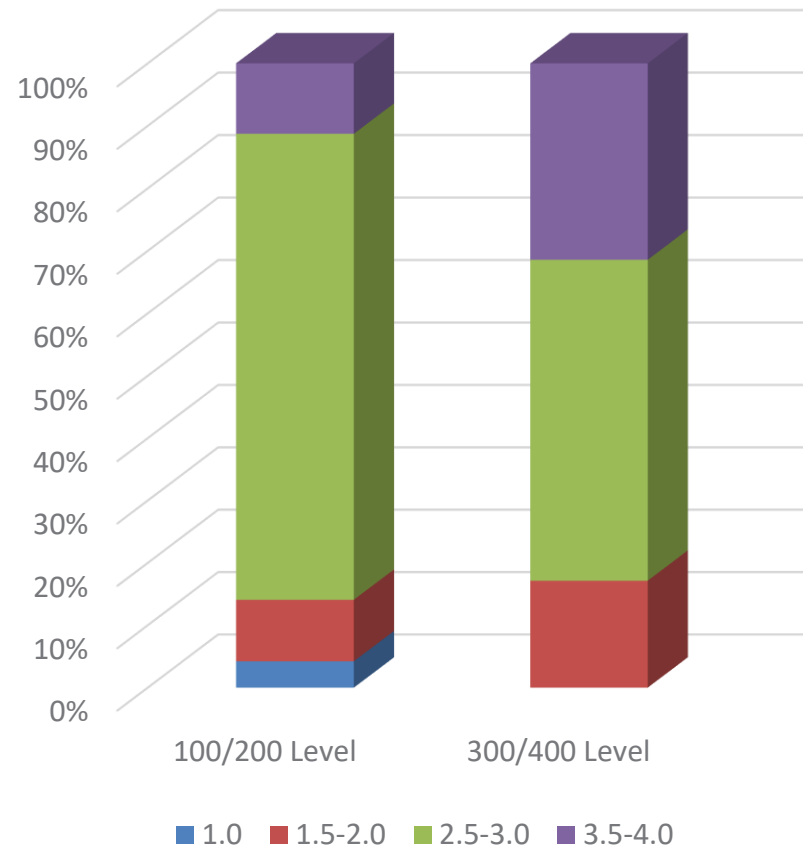| Course Level	Trait/ Performance Level	Context	Design	Diction	Style	Total
100/200	1.0	4 (6%)	3 (4%)	1 (1%)	1 (1%)	9 (3%)
300/400		0	0	0	0	0
100/200	1.5 – 2.0	13 (19%)	7 (10%)	10 (15%)	14 (20%)	44 (16%)
300/400		7 (21%)	6 (17%)	6 (18%)	7 (21%)	26 (19%)
100/200	2.5 – 3.0	41 (59%)	53 (75%)	44 (65%)	45 (65%)	183 (66%)
300/400		18 (53%)	18 (51%)	17 (52%)	23 (68%)	76 (56%)
100/200	3.5 – 4.0	12 (17%)	8 (11%)	13 (19%)	9 (13%)	42 (15%)
300/400		9 (26%)	11 (31%)	10 (30%)	4 (12%)	34 (25%)
100/200	**Total Tags with Usable Scores**	**70 (100%)**	**71 (100%)**	**68 (100%)**	**69 (100%)**	**278 (100%)**
300/400		**34 (100%)**	**35 (100%)**	**33 (100%)**	**34 (100%)**	**136 (100%)**
All Course Levels	**Grand Totals**	**104**	**106**	**101**	**103**	**414**

Communication Fluency
Frequency Analysis by Course Level

Context
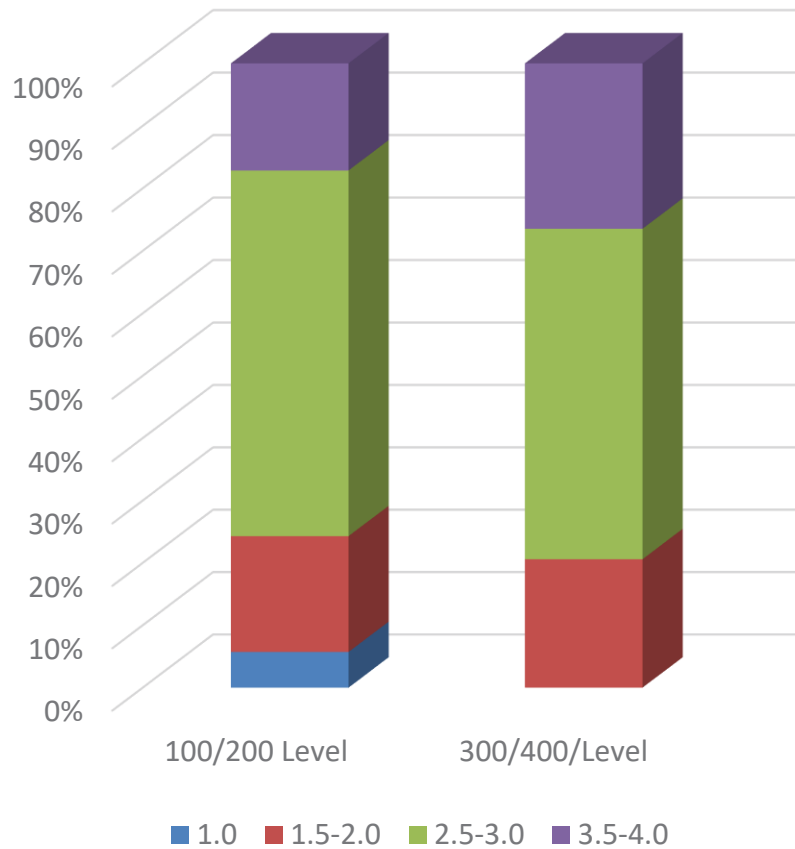
Design

Communication Fluency
Frequency Analysis by Course Level

Diction

Legend	
■ 1.0	■ 1.5-2.0 ■ 2.5-3.0 ■ 3.5-4.0

Style

Legend	
■ 1.0	■ .5-2.0 ■ 2.5-3.0 ■ 3.5-4.0
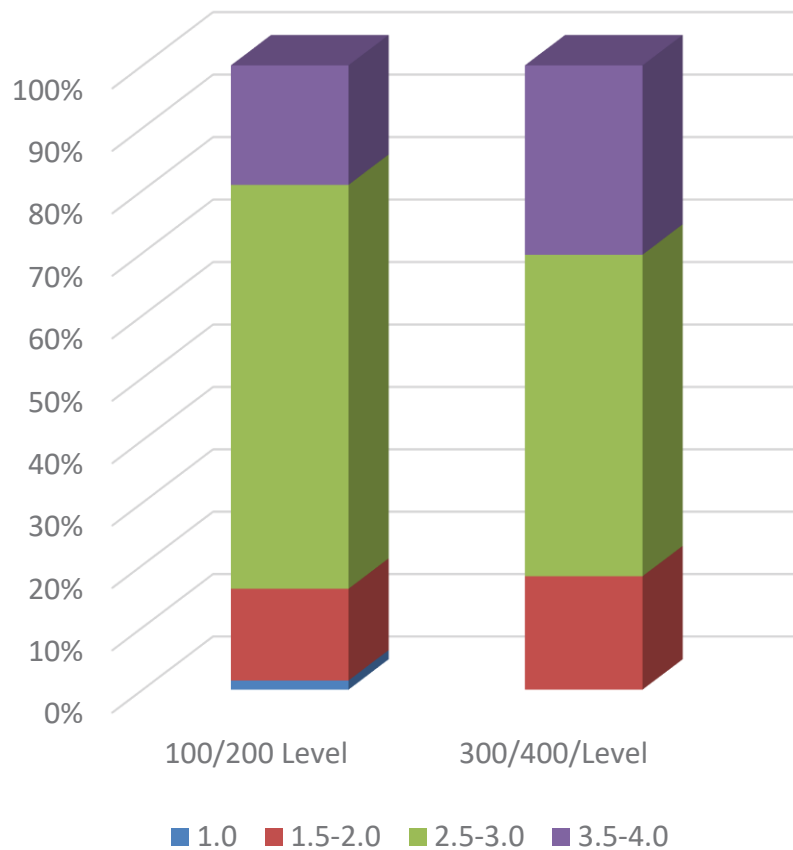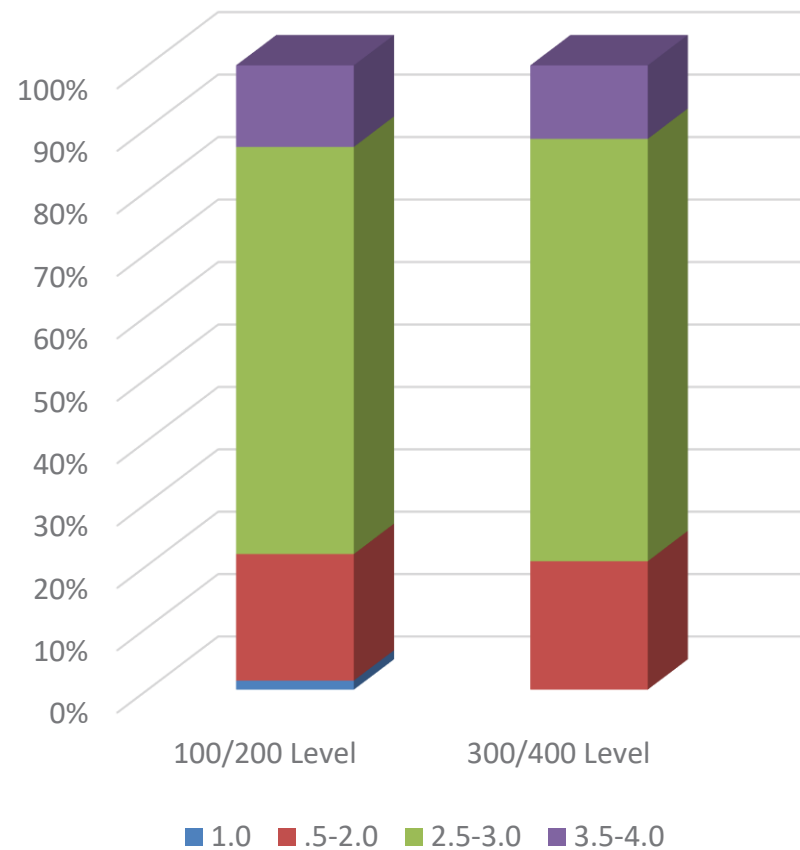
Communication Fluency
Inter-Rater Agreement Results

Trait/ Performance Level	Context Kappa Liberal = .862	Design Kappa Liberal = .938	Diction Kappa Liberal = .882	Style Kappa Liberal = .868
Agree on score	45 (42%)	42 (39%)	50 (46%)	49 (45%)
Difference = 1 point	49 (45%)	59 (55%)	45 (42%)	47 (44%)
Difference = 2 points	10 (9%)	4 (4%)	6 (6%)	6 (6%)
Difference = 3 points	0	0	0	1 (1%)
Agree on Not Aligned or Unable to Score Due to Error	2 (2%)	2 (2%)	3 (3%)	1 (1%)
Score + Not Aligned	2 (2%	1 (1%)	4 (4%)	4 (4%)
Total	108 (100%)	108 (100%)	108 (100%)	108 (100%)

Course Type Analysis

CT Courses

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score. All CT courses are 100/200 Level. Some artifacts were from courses that, in addition to being CT, also were Core II, multicultural, international, writing intensive, and/or community-based learning.
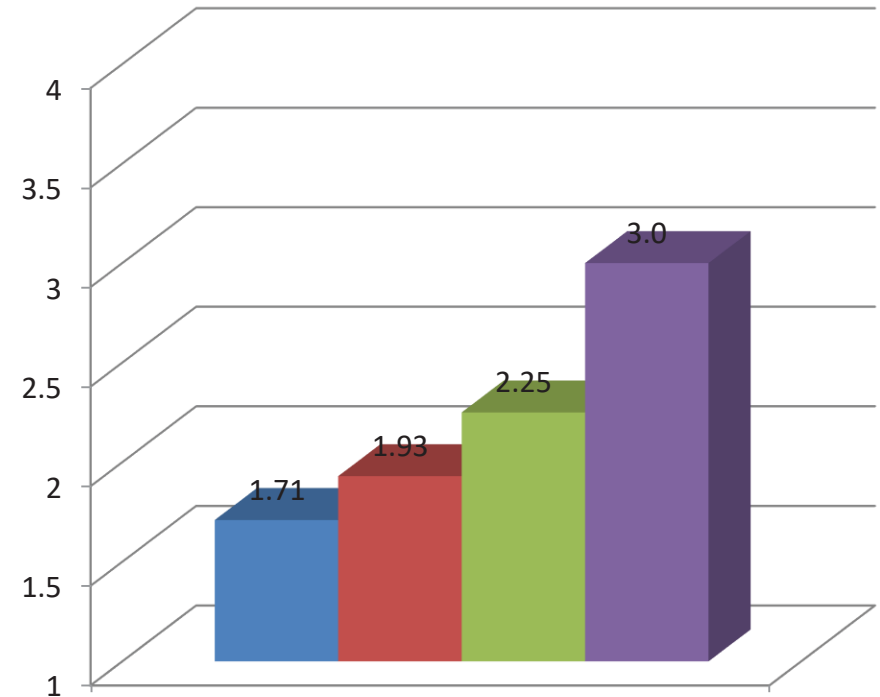
Intercultural Thinking

■ Own & Other; n = 42   ■ Communication; n = 27
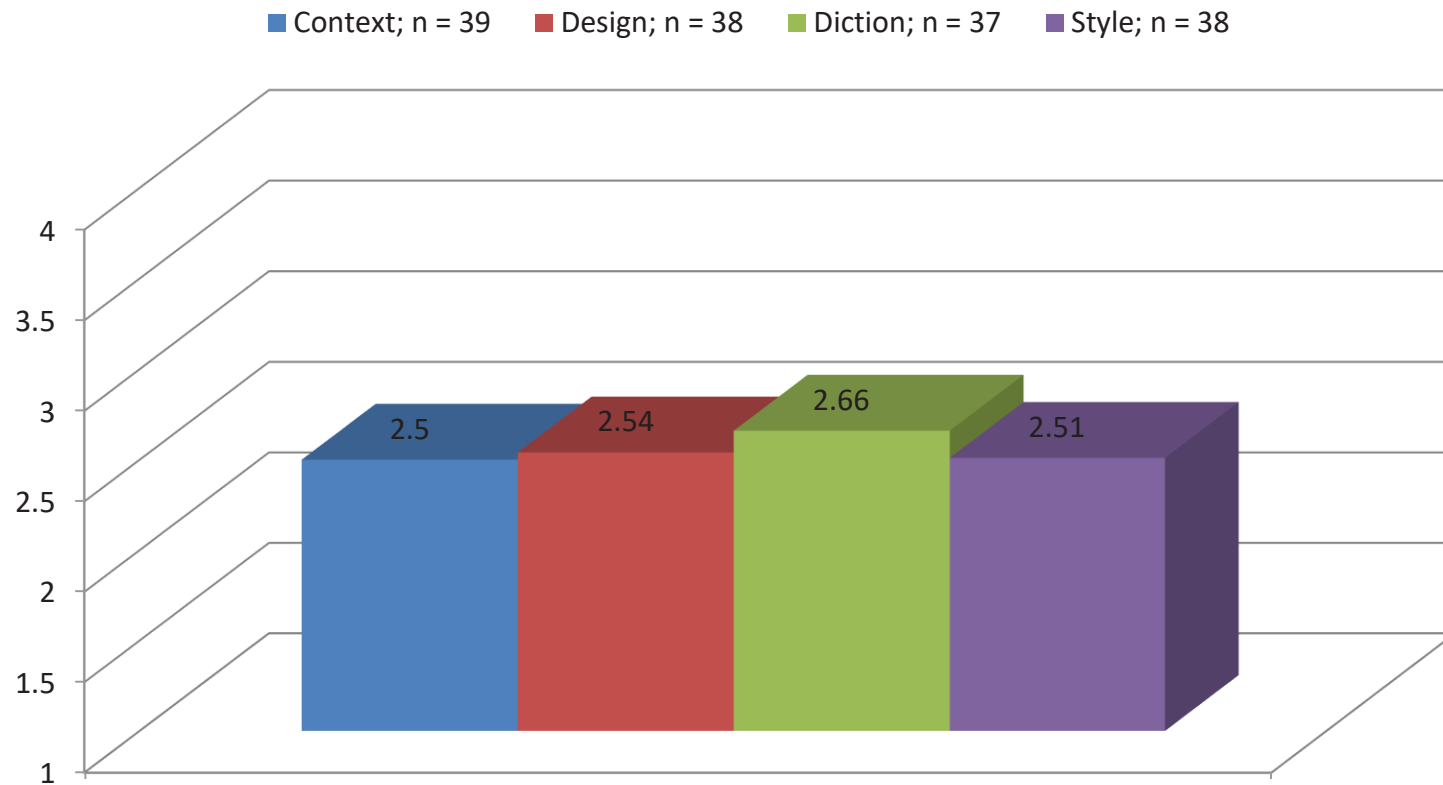■ Global Awareness; n = 31   ■ Conflict; n = 25
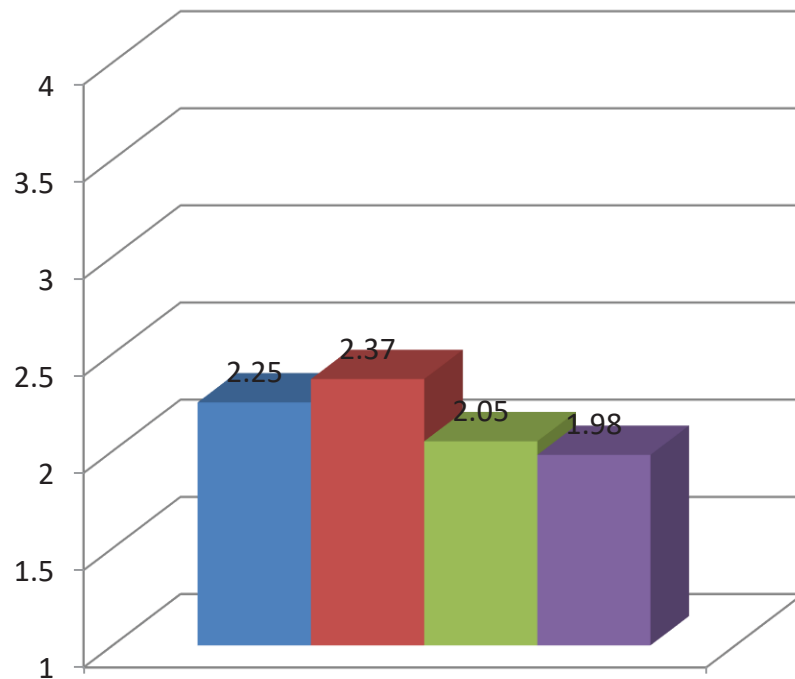
Ethical and Civic Thinking

■ Self-Awareness; n = 7   ■ Rules & Standards; n = 7
■ Civic Well-Being; n = 6   ■ Issues; n = 14

CT Courses

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score. Mean Scores on a scale of 1 – 4, with 4 being the highest possible score. All CT courses are 100/200 Level. Some artifacts were from courses that, in addition to being CT, also were Core II, multicultural, international, writing intensive, and/or community-based learning.

Communication Fluency

Legend: ■ Context; n = 39   ■ Design; n = 38   ■ Diction; n = 37   ■ Style; n = 38

- Context: 2.5
- Design: 2.54
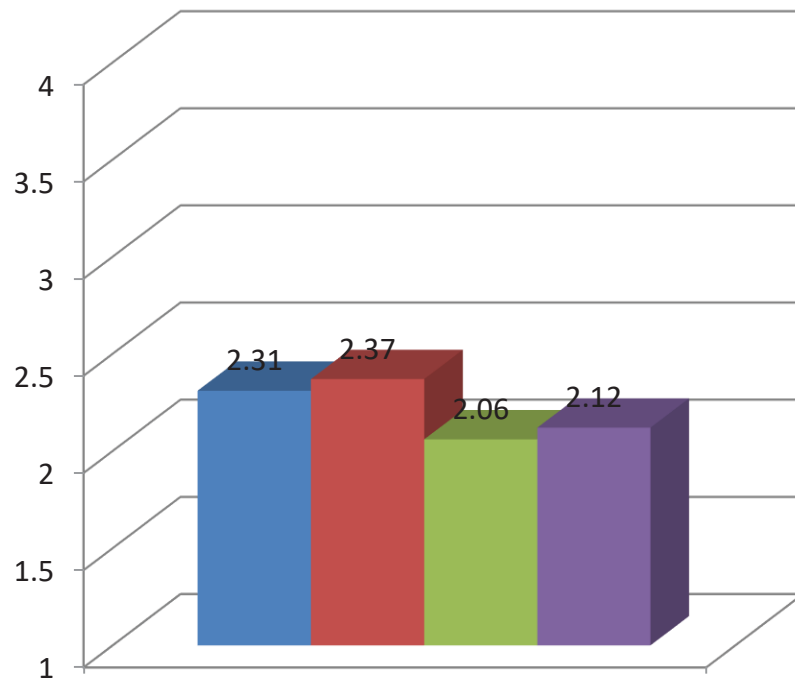- Diction: 2.66
- Style: 2.51

Core II Courses

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score. All Core II courses are 100/200 Level. Some artifacts were from courses that, in addition to being Core II, also were CT, multicultural, international, community-based learning, and/or writing intensive.
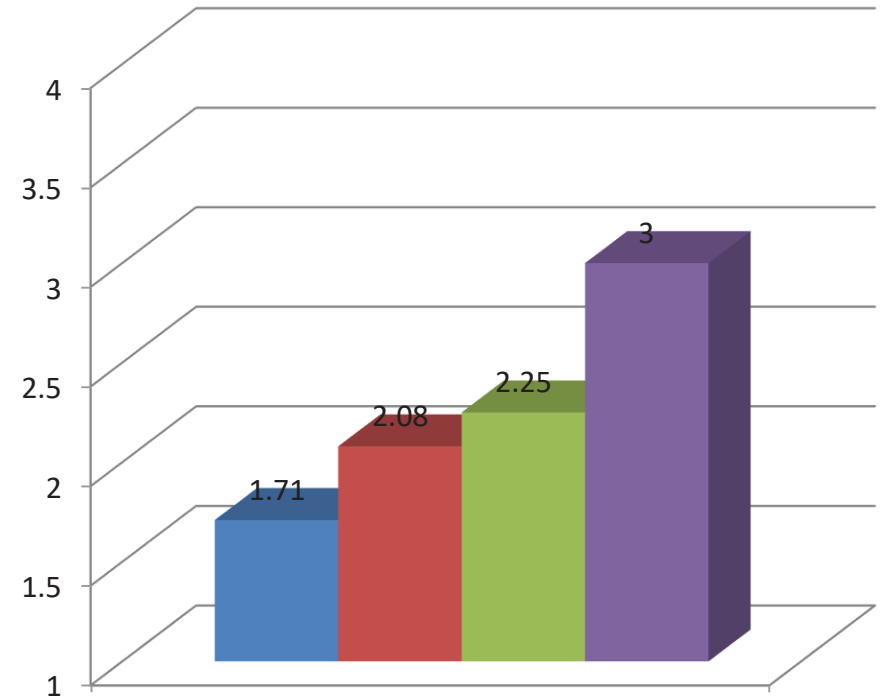
Intercultural Thinking

- ■ Own & Other; n = 58
- ■ Communication; n = 42
- ■ Global Awareness; n = 44
- ■ Conflict; n = 37

Own & Other: 2.31
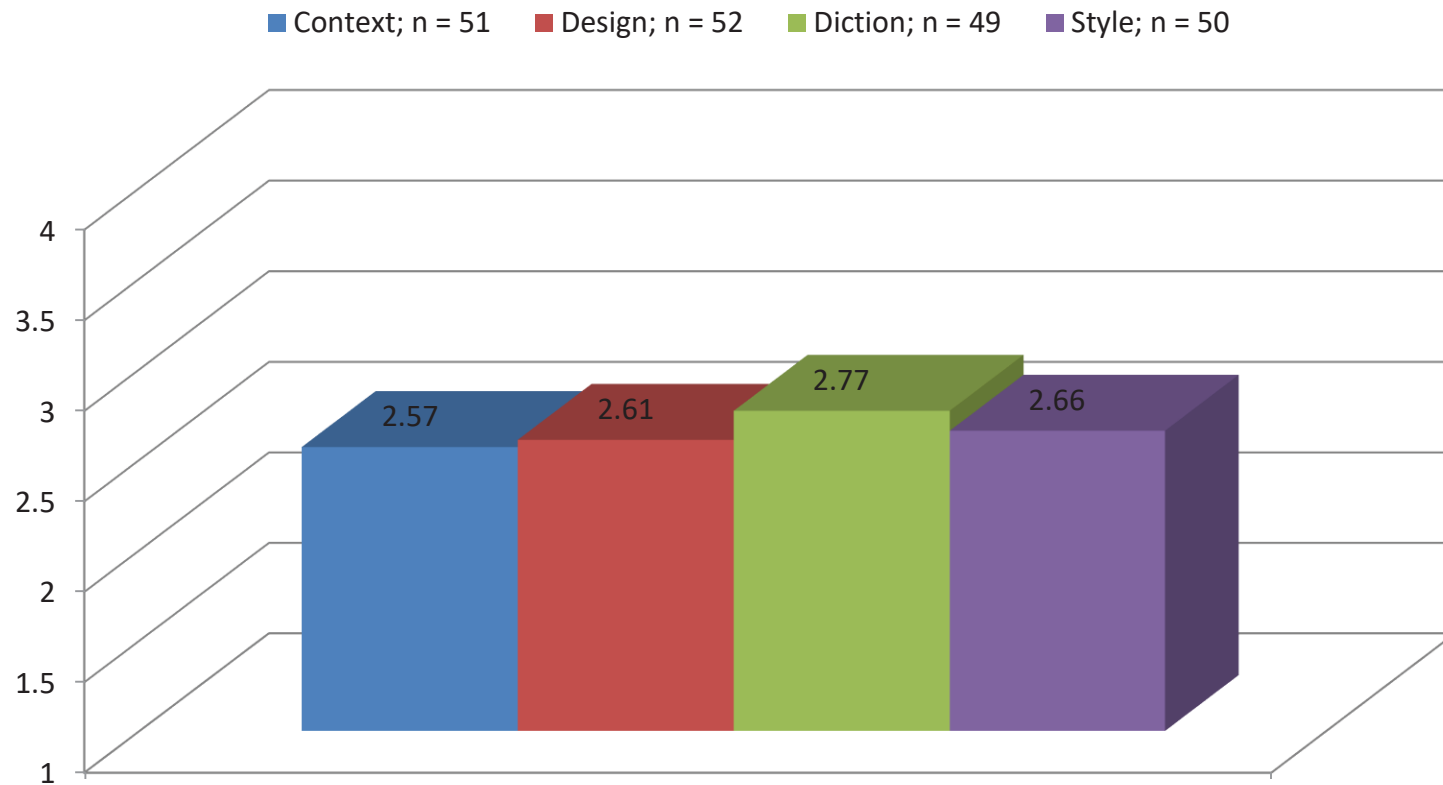Communication: 2.37
Global Awareness: 2.06
Conflict: 2.12

Ethical and Civic Thinking

- ■ Self-Awareness; n = 7
- ■ Rules & Standards; n = 6
- ■ Civic Well-Being; n = 6
- ■ Issues; n = 14

Self-Awareness: 1.71
Rules & Standards: 2.08
Civic Well-Being: 2.25
Issues: 3

Core II Courses

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score. All Core II courses are 100/200 Level. Some artifacts were from courses that, in addition to being Core II, also were CT, multicultural, international, community-based learning, and/or writing intensive.

Communication Fluency

■ Context; n = 51   ■ Design; n = 52   ■ Diction; n = 49   ■ Style; n = 50

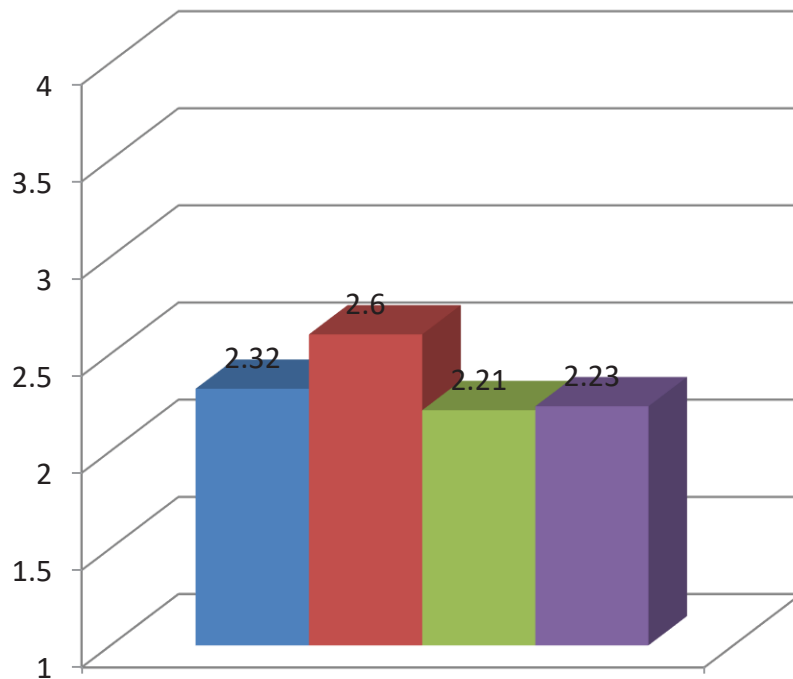|	Context	Design	Diction	Style
Mean Score	2.57	2.61	2.77	2.66

Writing Intensive Courses

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score. Some artifacts were from courses that, in addition to being WI, also were multicultural, international, CT, Core II, community-based learning, and/or capstone.
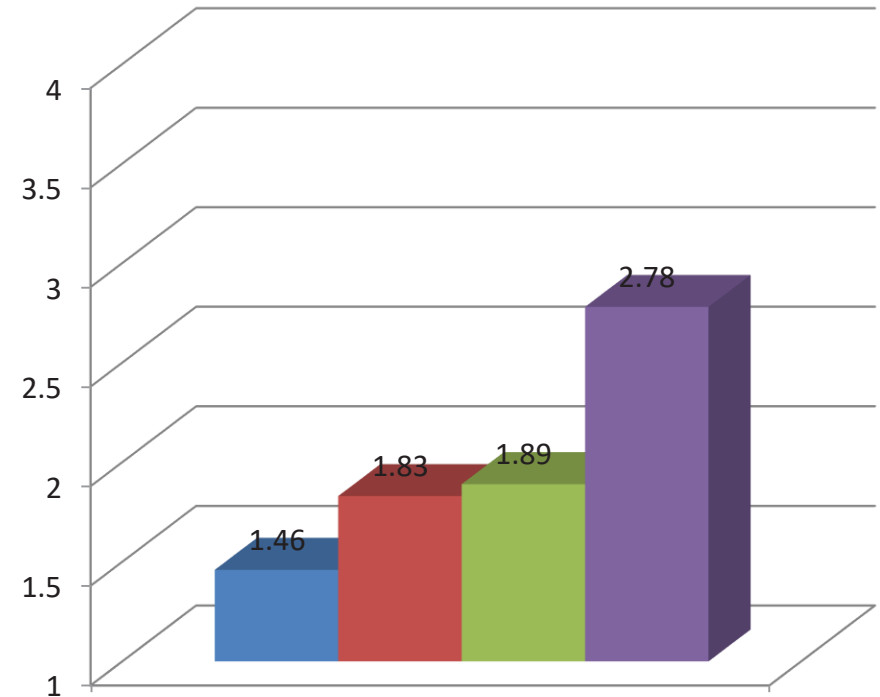
Intercultural Thinking

- Own & Other; n = 25
- Communication; n = 20
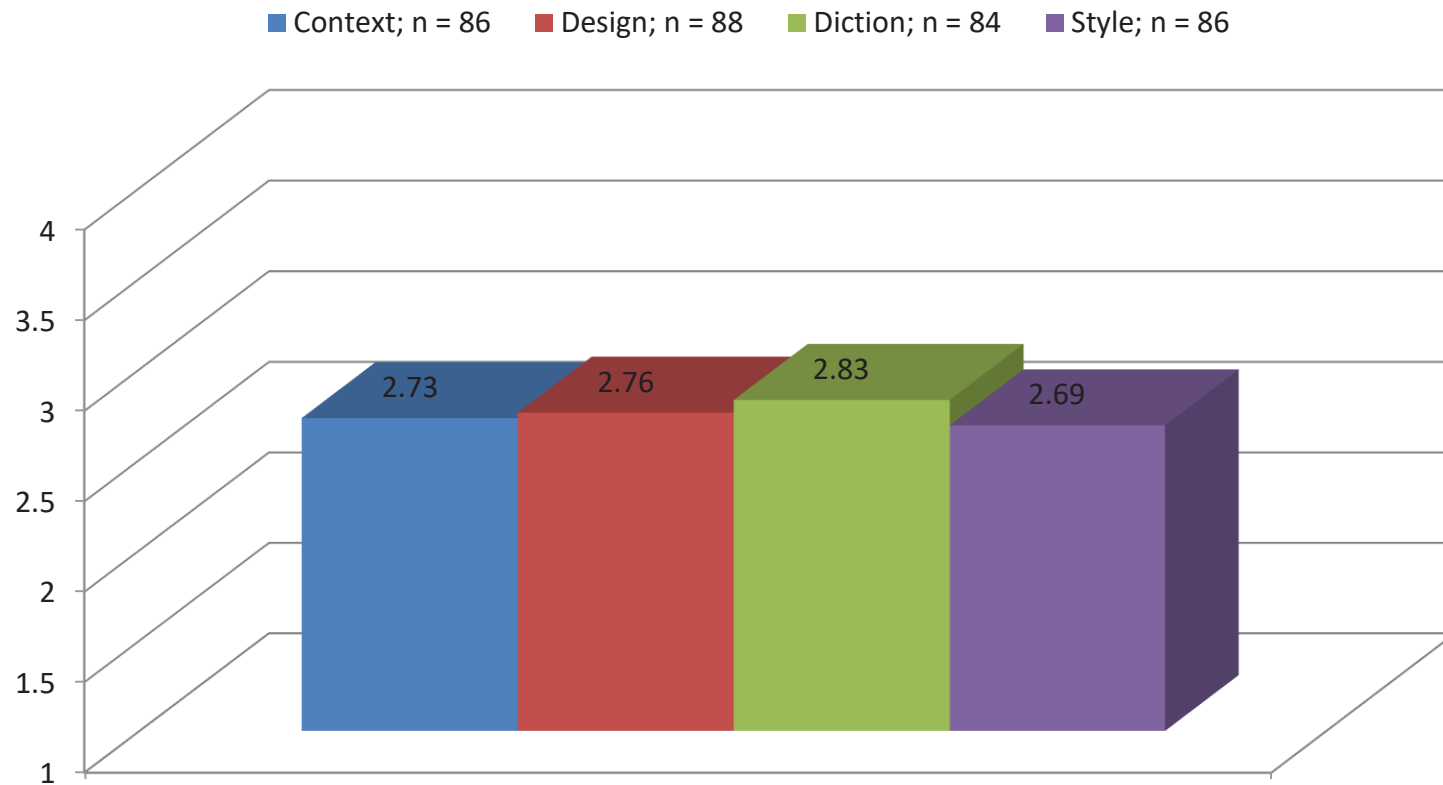- Global Awareness; n = 22
- Conflict; n = 20

Category	Mean Score
Own & Other	2.32
Communication	2.6
Global Awareness	2.21
Conflict	2.23

Ethical and Civic Thinking

- Self-Awareness; n = 14
- Rules & Standards; n = 9
- Civic Well-Being; n = 14
- Issues; n = 16

Category	Mean Score
Self-Awareness	1.46
Rules & Standards	1.83
Civic Well-Being	1.89
Issues	2.78

Writing Intensive Courses

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score. Mean Scores on a scale of 1 – 4, with 4 being the highest possible score. Some artifacts were from courses that, in addition to being WI, also were multicultural, international, CT, Core II, community-based learning, and/or capstone.
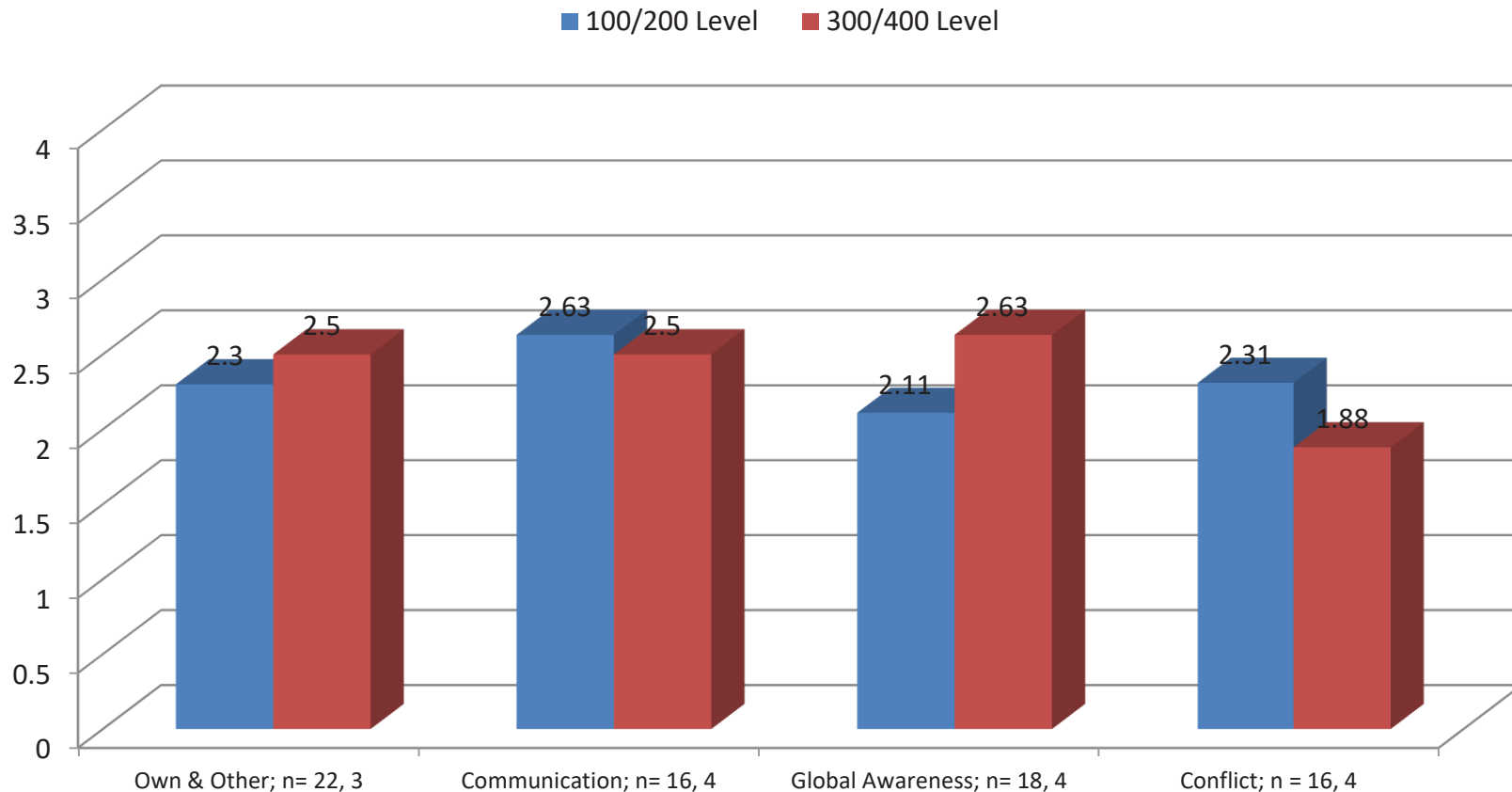
Communication Fluency

■ Context; n = 86   ■ Design; n = 88   ■ Diction; n = 84   ■ Style; n = 86

Context: 2.73
Design: 2.76
Diction: 2.83
Style: 2.69

Writing Intensive Courses

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score. Mean Scores on a scale of 1 – 4, with 4 being the highest possible score. Some artifacts were from courses that, in addition to being WI, also were multicultural, international, CT, Core II, community-based learning, and/or capstone.
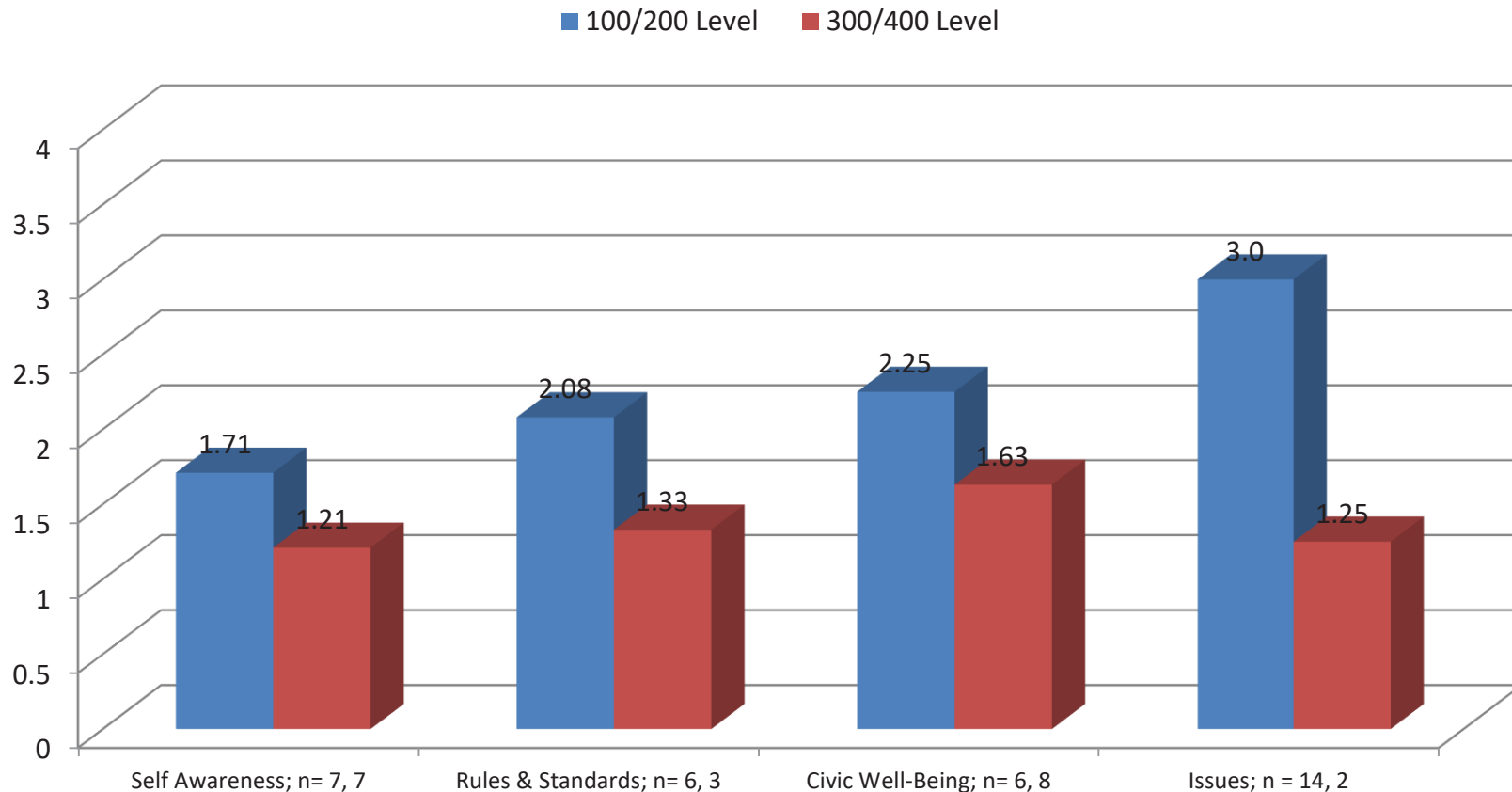
Intercultural Thinking

Legend: ■ 100/200 Level ■ 300/400 Level

Category	100/200 Level	300/400 Level
Own & Other; n= 22, 3	2.3	2.5
Communication; n= 16, 4	2.63	2.5
Global Awareness; n= 18, 4	2.11	2.63
Conflict; n = 16, 4	2.31	1.88

Writing Intensive Courses

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score. Mean Scores on a scale of 1 – 4, with 4 being the highest possible score. Some artifacts were from courses that, in addition to being WI, also were multicultural, international, CT, Core II, community-based learning, and/or capstone.
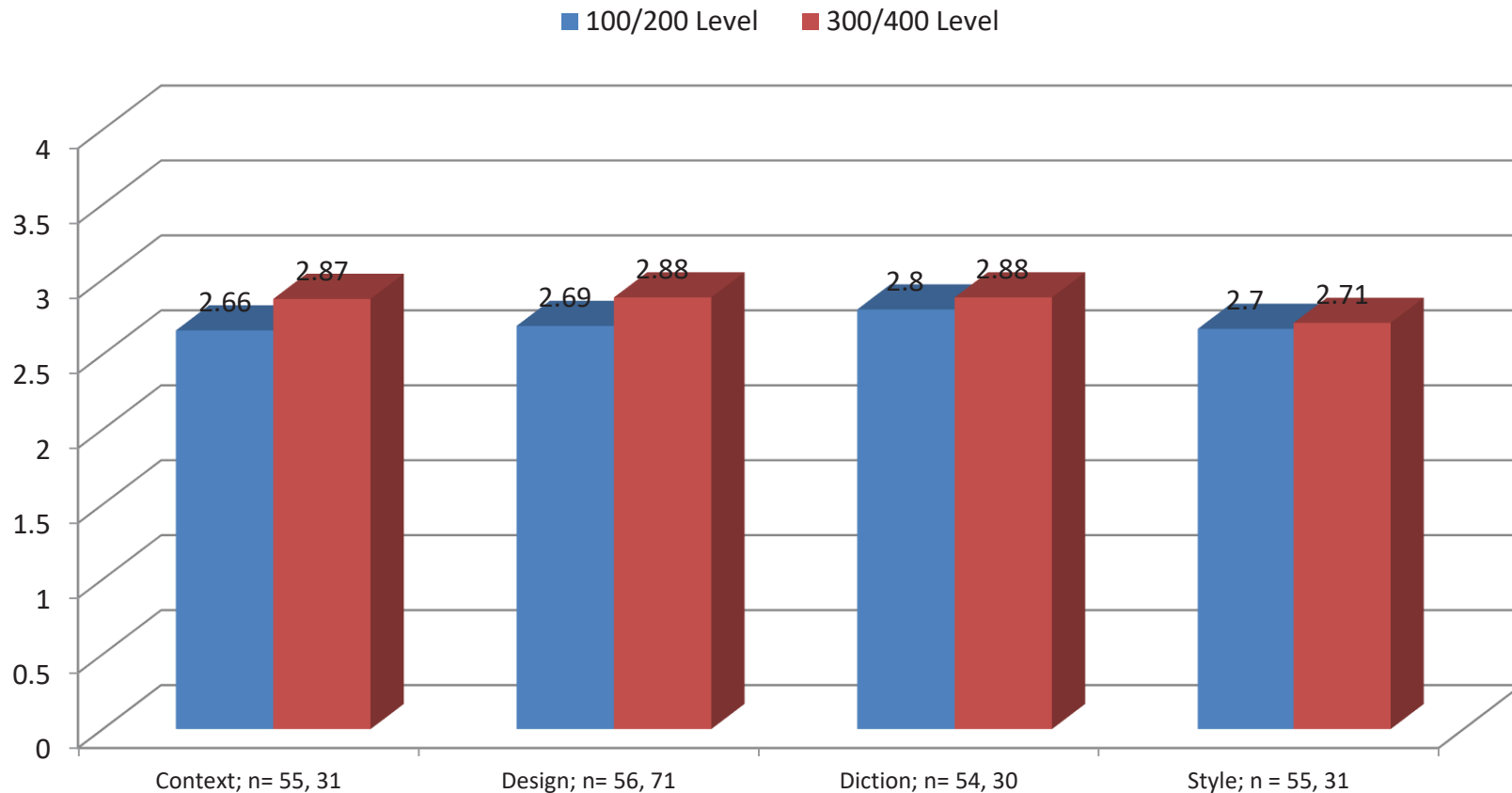
Ethical and Civic Thinking

- ■ 100/200 Level
- ■ 300/400 Level

Category	100/200 Level	300/400 Level
Self Awareness; n= 7, 7	1.71	1.21
Rules & Standards; n= 6, 3	2.08	1.33
Civic Well-Being; n= 6, 8	2.25	1.63
Issues; n = 14, 2	3.0	1.25

Writing Intensive Courses

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score Mean Scores on a scale of 1 – 4, with 4 being the highest possible score. Some artifacts were from courses that, in addition to being WI, also were multicultural, international, CT, Core II, community-based learning, and/or capstone.

Communication Fluency

■ 100/200 Level   ■ 300/400 Level

|	Context; n= 55, 31	Design; n= 56, 71	Diction; n= 54, 30	Style; n = 55, 31
100/200 Level	2.66	2.69	2.8	2.7
300/400 Level	2.87	2.88	2.88	2.71

Multicultural Courses

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score. Some artifacts were from courses that, in addition to being MC, also were WI, CT, and/or Core II. Please note that all MC courses aligned to Ethical and Civic Thinking were 100/200 Level
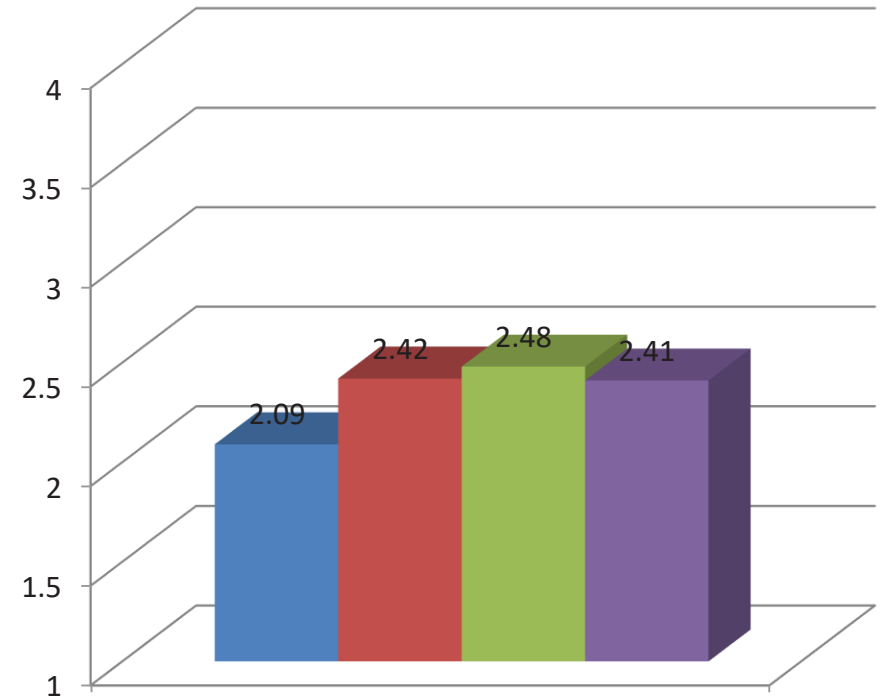
Intercultural Thinking

- Own & Other; n = 72
- Communication; n = 55
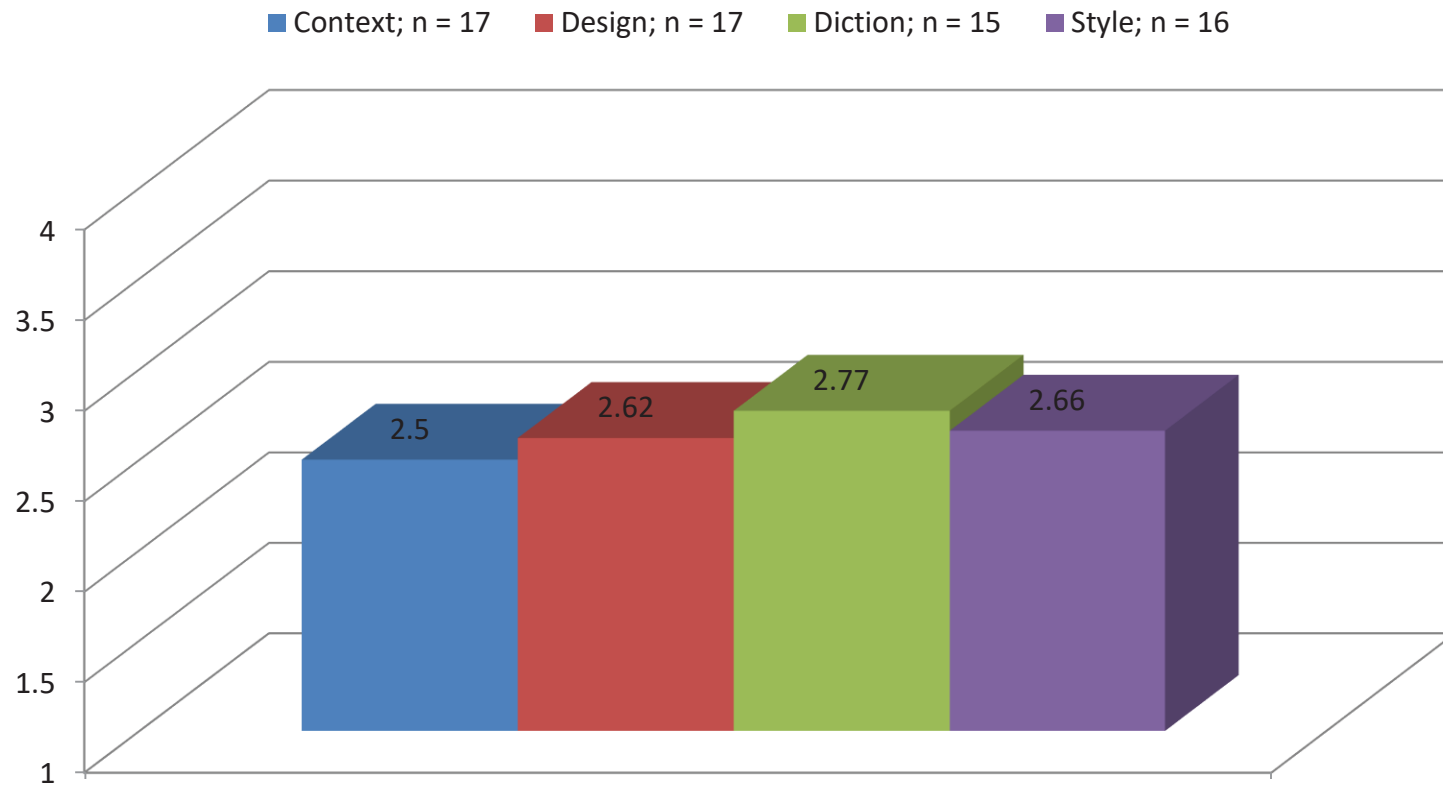- Global Awareness; n = 49
- Conflict; n = 43

Own & Other: 2.4
Communication: 2.45
Global Awareness: 2.07
Conflict: 2.09
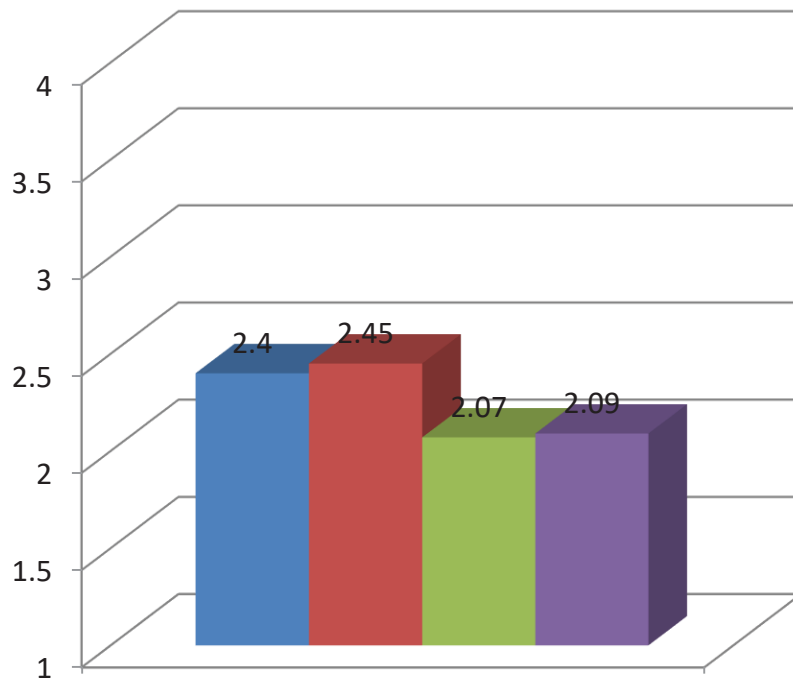
Ethical and Civic Thinking

- Self-Awareness; n = 17
- Rules & Standards; n = 24
- Civic Well-Being; n = 21
- Issues; n = 22

Self-Awareness: 2.09
Rules & Standards: 2.42
Civic Well-Being: 2.48
Issues: 2.41

Multicultural Courses

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score. Some artifacts were from courses that, in addition to being MC, also were WI, CT, and/or Core II.
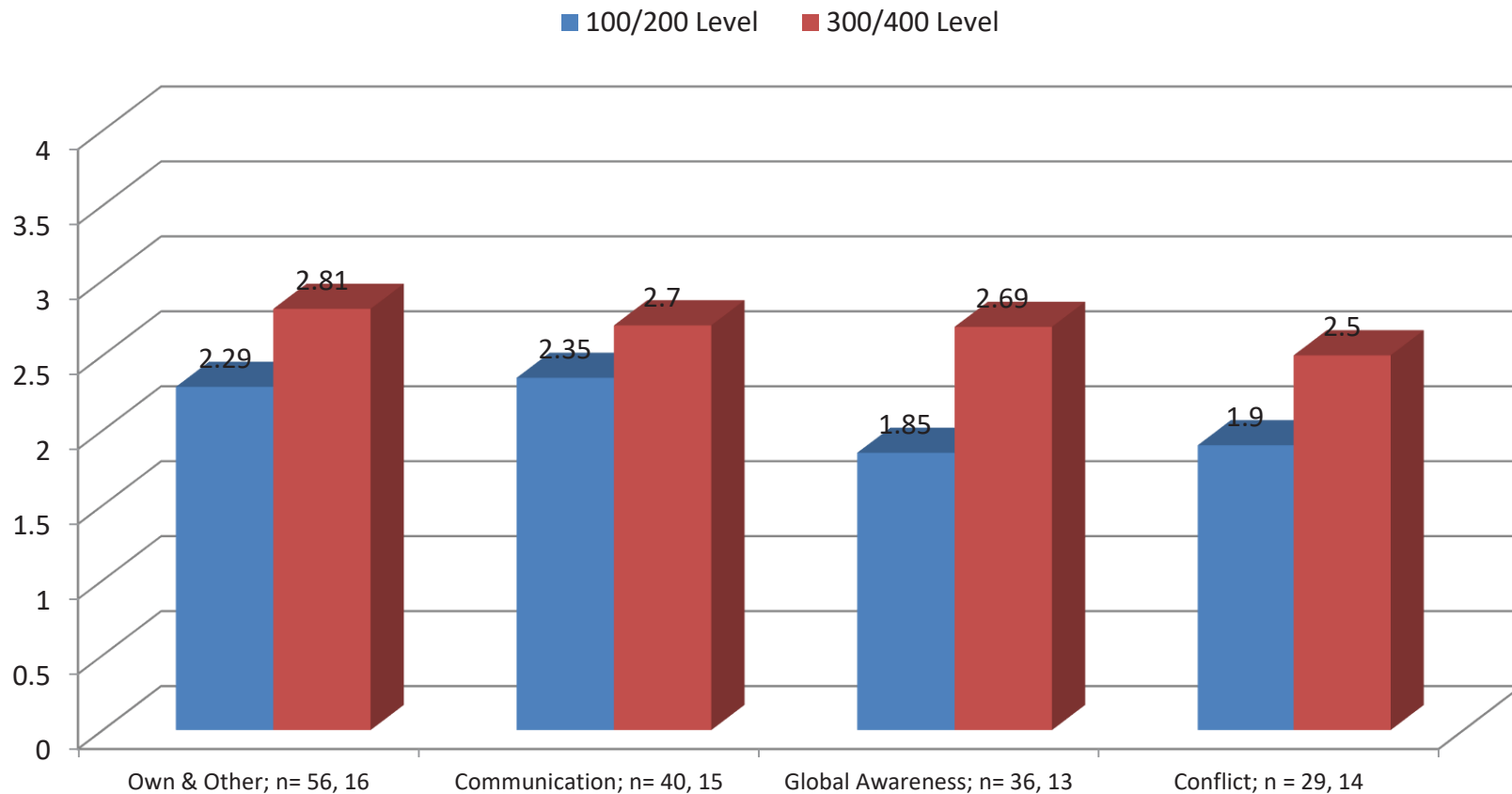
Communication Fluency

Legend: ■ Context; n = 17   ■ Design; n = 17   ■ Diction; n = 15   ■ Style; n = 16

Values: Context 2.5, Design 2.62, Diction 2.77, Style 2.66

Multicultural Courses

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score. Some artifacts were from courses that, in addition to being MC, also were WI, CT, and/or Core II.
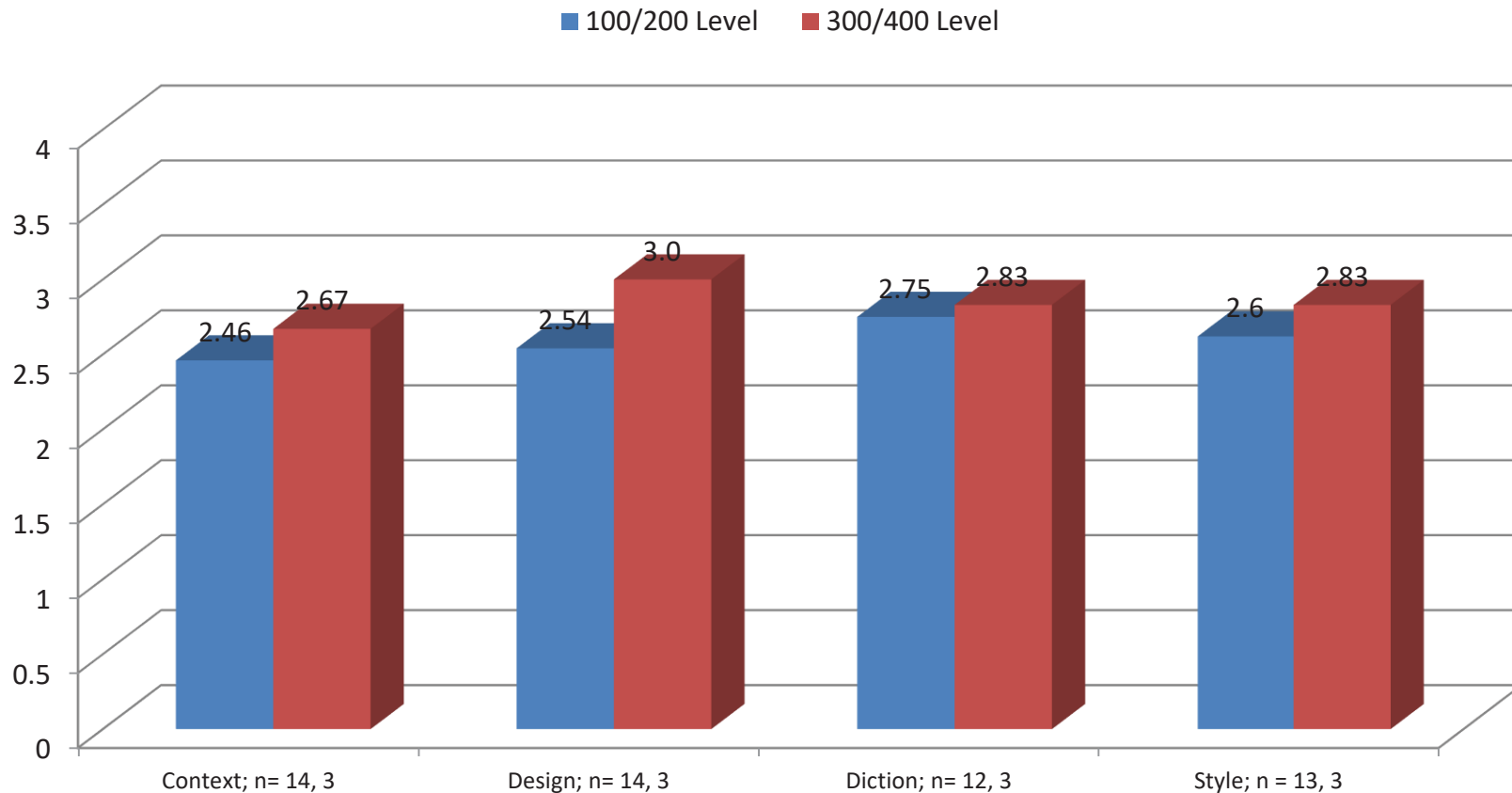
Intercultural Thinking

Legend: ■ 100/200 Level   ■ 300/400 Level

Category	100/200 Level	300/400 Level
Own & Other; n= 56, 16	2.29	2.81
Communication; n= 40, 15	2.35	2.7
Global Awareness; n= 36, 13	1.85	2.69
Conflict; n = 29, 14	1.9	2.5

Multicultural Courses

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score. Some artifacts were from courses that, in addition to being MC, also were WI, CT, and/or Core II.

Communication Fluency

■ 100/200 Level   ■ 300/400 Level

| Category	100/200 Level	300/400 Level
Context; n= 14, 3	2.46	2.67
Design; n= 14, 3	2.54	3.0
Diction; n= 12, 3	2.75	2.83
Style; n = 13, 3	2.6	2.83

International Courses

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score. Some artifacts were from courses that, in addition to being INT, also were WI, CT, Core II, and/or CBL. Please note that there were no International Course artifacts aligned to Communication fluency or to the first three traits of Ethical and Civic Thinking.
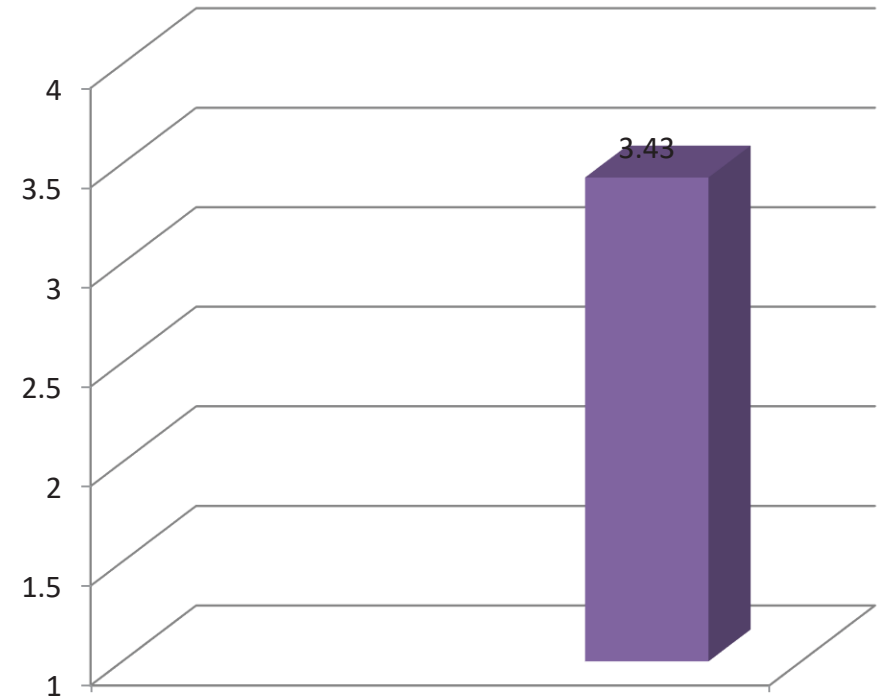
Intercultural Thinking

- Own & Other; n = 5
- Communication; n = 4
- Global Awareness; n = 13
- Conflict; n = 12

Own & Other: 2.7
Communication: 2.5
Global Awareness: 2.65
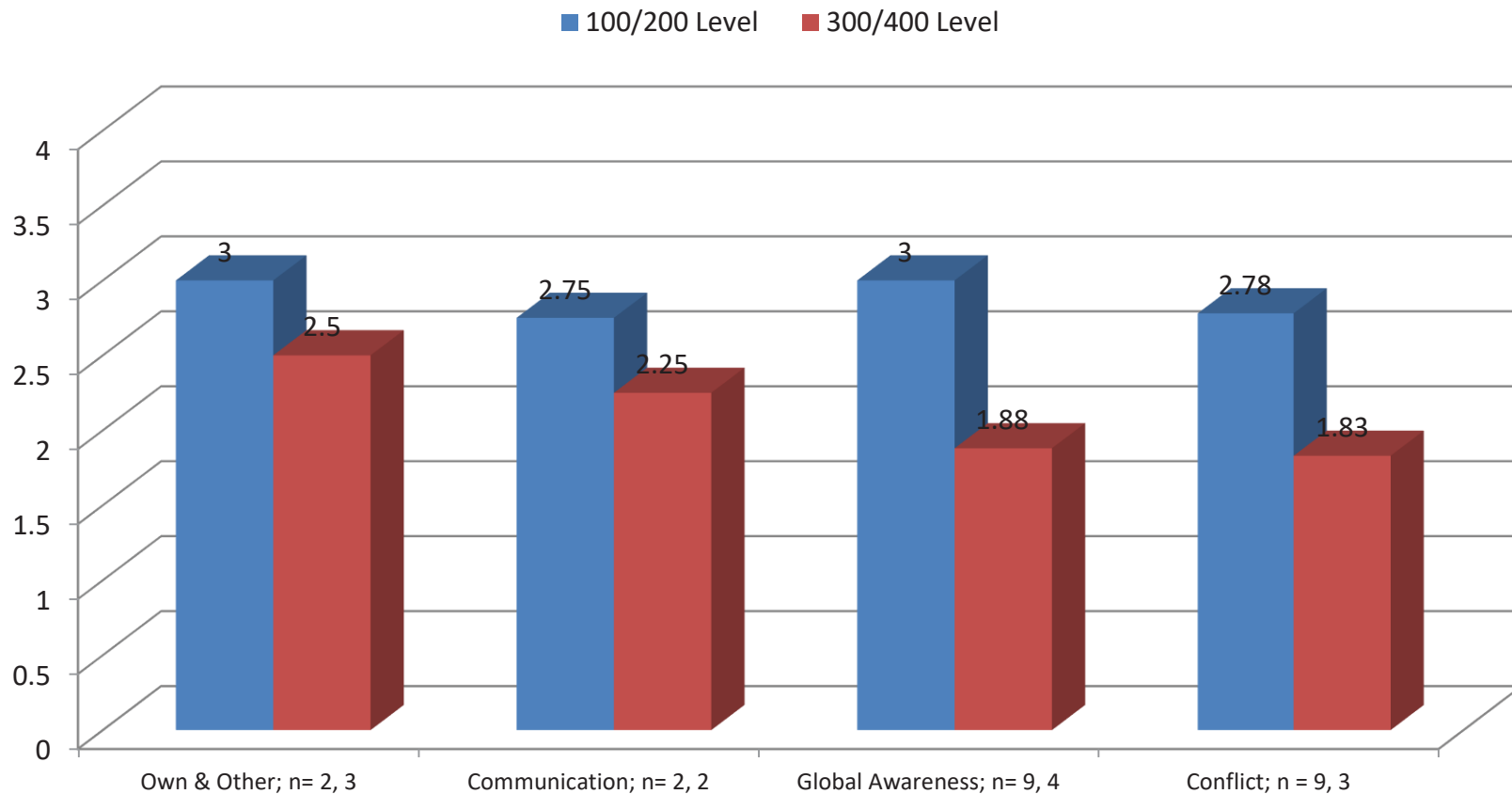Conflict: 2.54
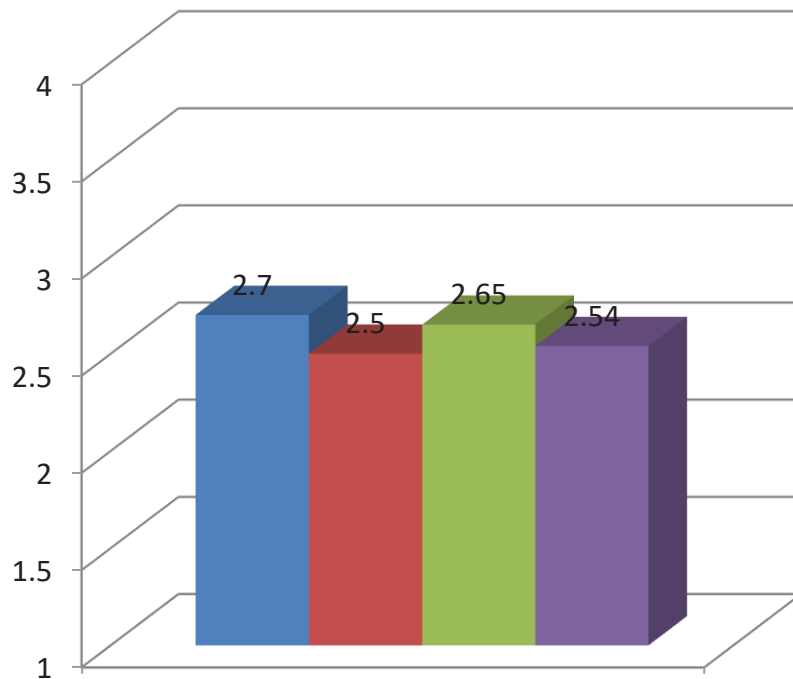
Ethical and Civic Thinking

- Self-Awareness; n = 0
- Rules & Standards; n = 0
- Civic Well-Being; n = 0
- Issues; n = 7

Issues: 3.43

International Courses

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score. Some artifacts were from courses that, in addition to being INT, also were WI, CT, Core II, and/or CBL.

Intercultural Thinking

■ 100/200 Level ■ 300/400 Level

| Category	100/200 Level	300/400 Level
Own & Other; n= 2, 3	3	2.5
Communication; n= 2, 2	2.75	2.25
Global Awareness; n= 9, 4	3	1.88
Conflict; n = 9, 3	2.78	1.83

Community Based Learning Courses

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score. Some artifacts were from courses that, in addition to being CBL, also were WI, international, CT, and/or Core II. Please note that there were no CBL Course artifacts aligned to Intercultural Thinking and only two were aligned to Communication Fluency at the 300/400 Level
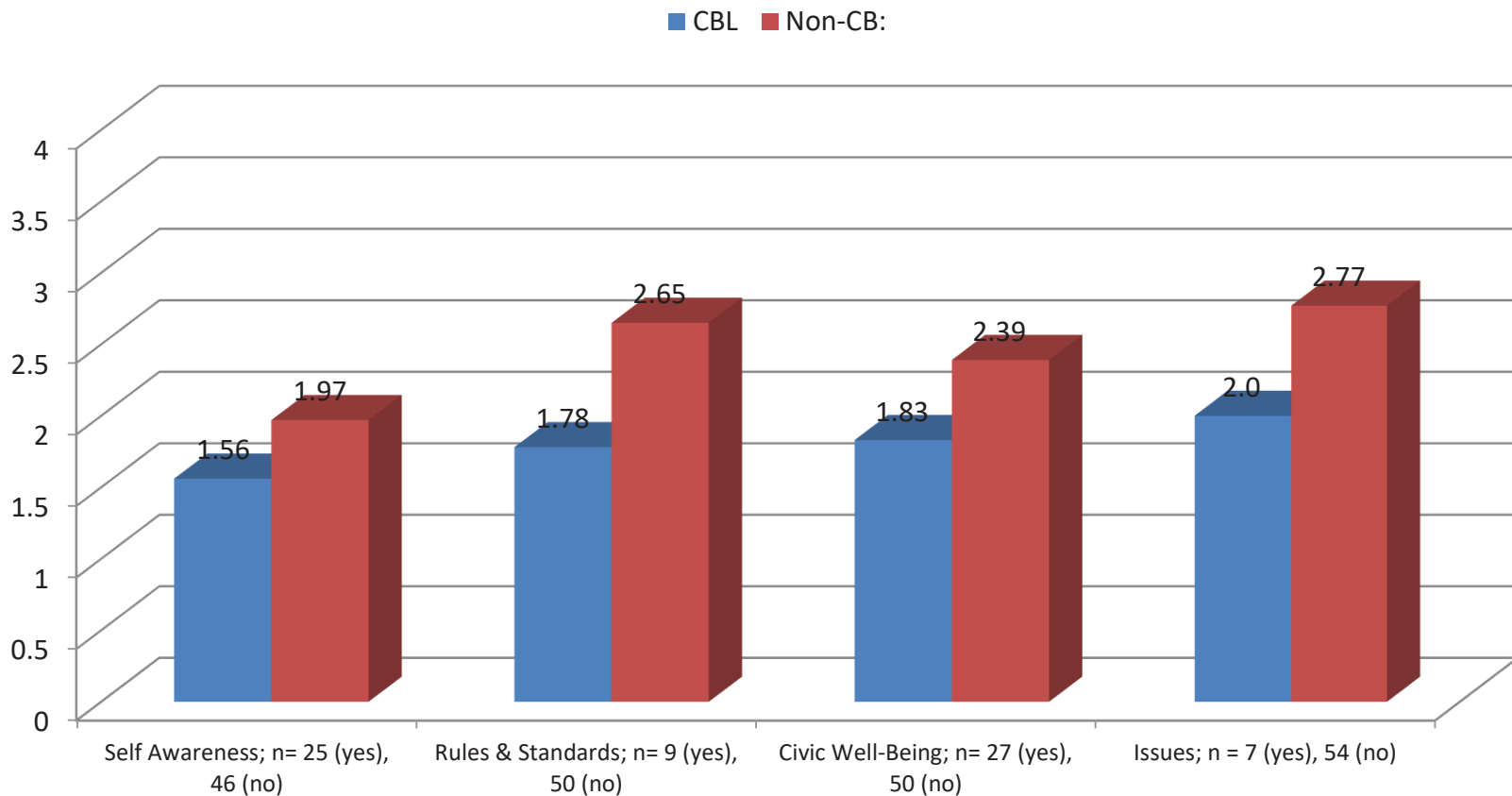
Ethical and Civic Thinking

■ Self-Awareness; n = 25   ■ Rules & Standards; n = 9   ■ Civic Well-Being; n = 27   ■ Issues; n = 7

- 1.56
- 1.78
- 1.83
- 2.0
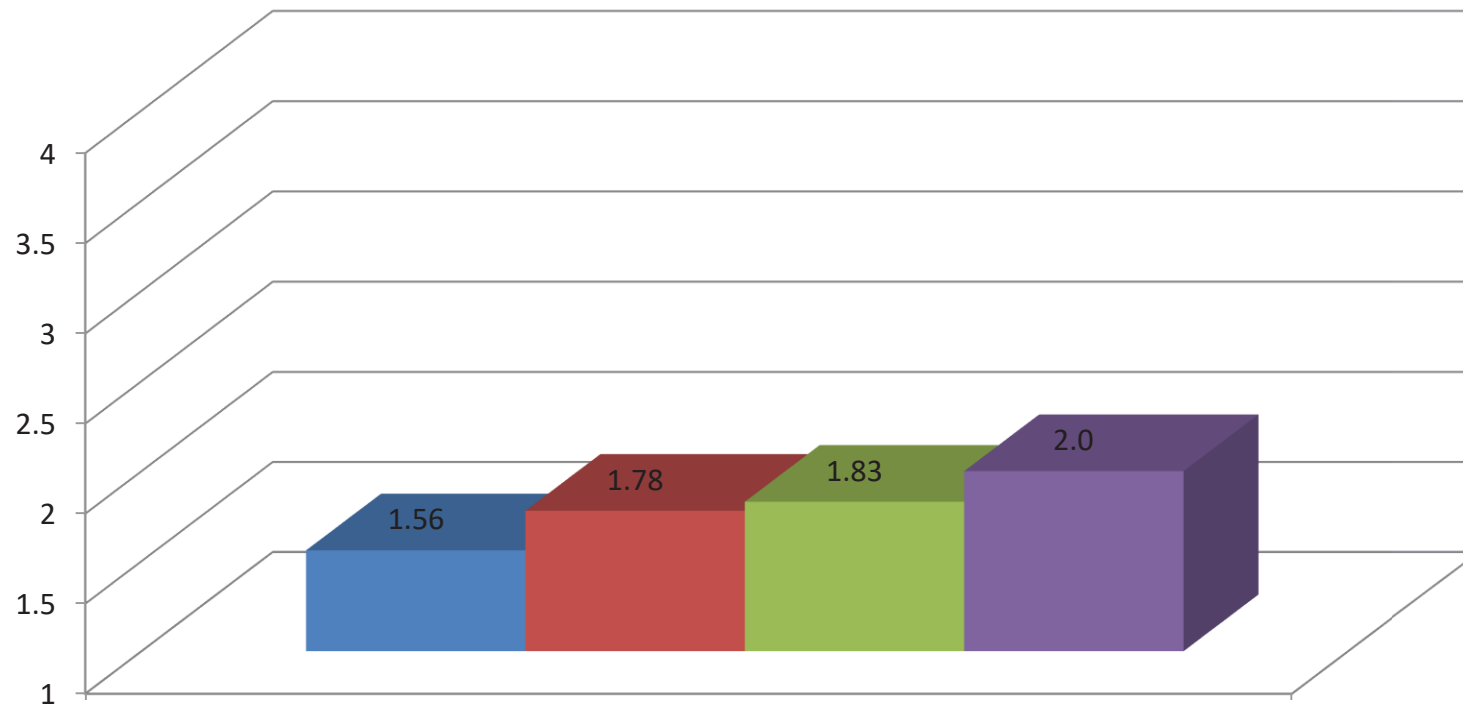
Comparison of CBL and Non-CBL Courses

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score. . Some artifacts were from courses that, in addition to being CBL, also were WI, international, CT, and/or Core II.

Ethical and Civic Thinking

Legend: ■ CBL ■ Non-CB:

| Category	CBL	Non-CBL
Self Awareness; n= 25 (yes), 46 (no)	1.56	1.97
Rules & Standards; n= 9 (yes), 50 (no)	1.78	2.65
Civic Well-Being; n= 27 (yes), 50 (no)	1.83	2.39
Issues; n = 7 (yes), 54 (no)	2.0	2.77

Capstone Courses

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score. Some artifacts were from courses that, in addition to being Capstone, also were WI, international, CT, and/or CBL. Please note that there were no International Course artifacts aligned to Communication fluency or to the first three traits of Ethical and Civic Thinking.
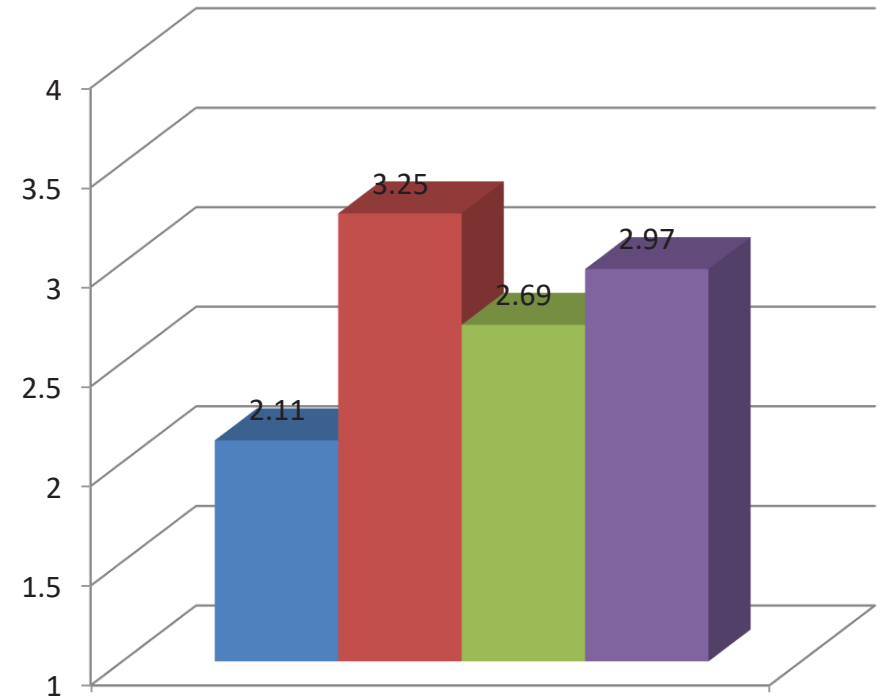
Intercultural Thinking

- Own & Other; n = 2
- Communication; n = 2
- Global Awareness; n = 0
- Conflict; n = 2

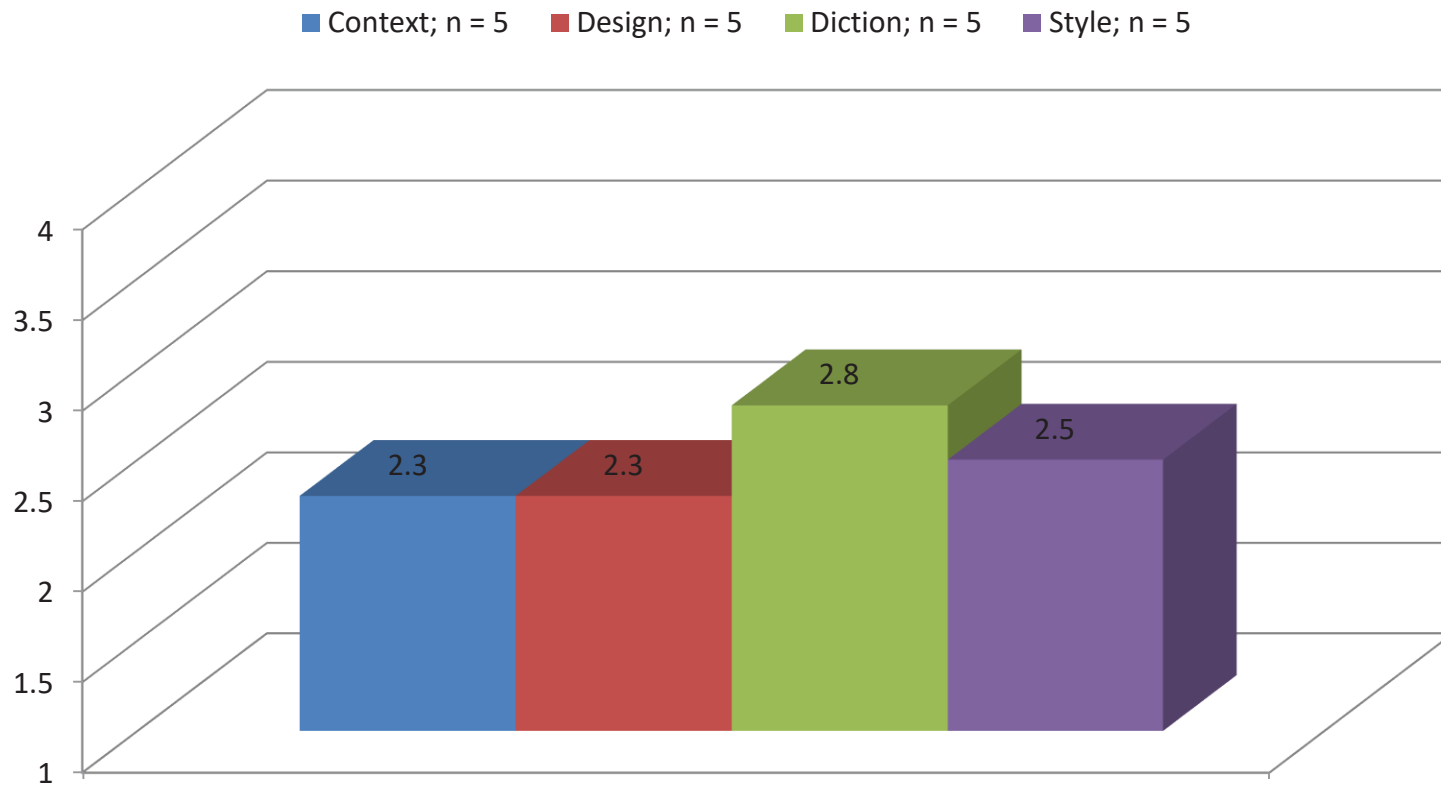|	Score
Own & Other	3.0
Communication	3.5
Conflict	3.25
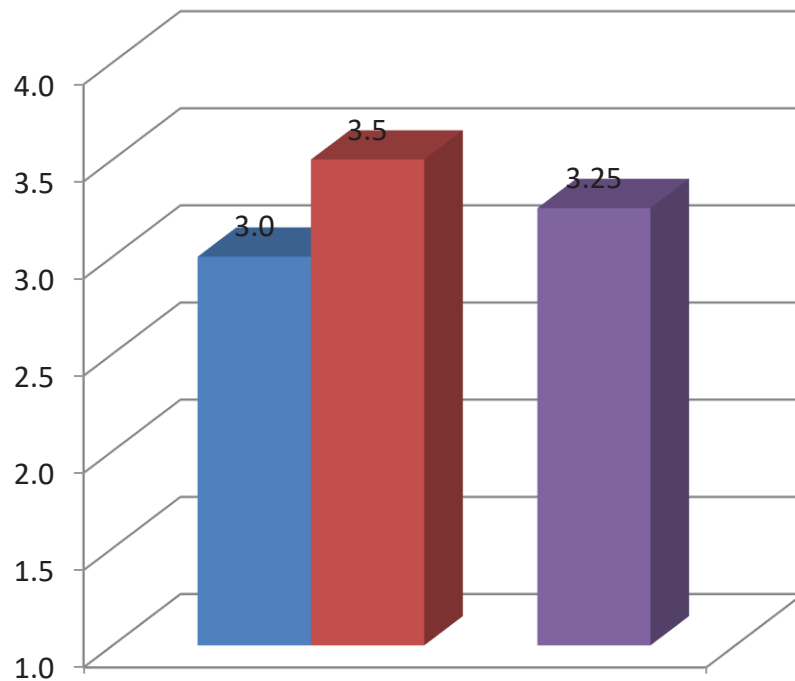
Ethical and Civic Thinking

- Self-Awareness; n = 19
- Rules & Standards; n = 18
- Civic Well-Being; n = 18
- Issues; n = 19

	Score
Self-Awareness	2.11
Rules & Standards	3.25
Civic Well-Being	2.69
Issues	2.97

Capstone Courses

Mean Scores on a scale of 1 – 4, with 4 being the highest possible score. Some artifacts were from courses that, in addition to being Capstone, also were WI, international, CT, and/or CBL.

Communication Fluency

■ Context; n = 5   ■ Design; n = 5   ■ Diction; n = 5   ■ Style; n = 5

	Context	Design	Diction	Style
Score	2.3	2.3	2.8	2.5

Reference

Stellmack, M.A., Kohneim-Kalkstein, Y. L, Manor, J. E., Massey, A. R., & Schmitz, J. A. P. (2009). An assessment of reliability and validity of a rubric for grading APA-style introductions. *Teaching of Psychology*, *36*, 102-107.