

University of California, Irvine

**2009 Assessment of
Lower Division Writing at UCI**

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April 20, 2010

Introduction

The purpose of this report is to present findings from the 2009 Assessment of Lower-Division Writing at UCI. A random selection of papers from all lower-division writing courses were collected in Spring 2009 and assessed to determine the quality of student writing achieved through completion of the lower-division writing requirement at UCI.

Key Findings

The review of writing products in fulfillment of the lower-division writing requirement found the quality of student writing to be fairly similar across lower-division writing trajectories. Students appear to be strongest in their writing skills related to the rhetorical knowledge category and weakest in the category of structure and organization. The review of student writing products found that students are able to demonstrate the quality of writing expected upon completion of the lower division writing requirement.

Humanities Core papers achieved the highest scores in 11 of the 12 writing traits contained within the lower-division writing rubric, with significant differences observed in 2 of the writing traits contained within the critical thinking and analysis category. For these two traits, source/evidence credibility and/or relevance and documentation, Humanities Core papers demonstrated a higher level of achievement than papers produced in either Writing 39C or FIP. Papers produced in Writing 39C and FIP achieved nearly identical assessment scores, with FIP papers being slightly stronger in the language use category and Writing 39C papers being slightly stronger in the critical thinking and analysis category. Students who report speaking only English achieved slightly higher scores than their non-English-only counterparts in all 12 of the writing traits contained in the lower-division writing rubric, with significant differences observed in the language eloquence trait. The Lower Division Writing Assessment Rubric was found to be a reliable tool overall. Nonetheless, the findings from this project suggest the need for a writing rubric that is flexible enough to capture writing skills demonstrated through the production of both creative and research-driven writing projects.

Overall, the results from this project suggest that while different lower-division writing trajectories seem to yield similar overall writing gains, there are some differences worthy of further investigation. The results of this project unfortunately do not clarify the degree to which the small observed differences in writing quality are a function of course length, instructional methods, or characteristics of the student population.

Assessment Design

Beginning in Fall 2008, the Campus Writing Coordinator convened all lower-division writing program directors to begin discussions about the development of an assessment of student writing produced through the completion of the lower-division writing requirement at UCI. The goals for this project were to develop a rubric that captured the shared expectations across lower-division writing courses, to begin to understand the unique writing skills developed by different lower-division writing courses, to assess the quality of student writing produced herein, and to determine whether such student characteristics as first language impact the quality of student writing. With these goals in mind, this project sought to address the following questions:

- Writing Rubric: What are the shared writing expectations across the lower-division writing courses? To what extent is it possible to develop a useful scoring rubric that reflects these expectations and is reliable?
- Student Writing Skills: What is the quality of student writing produced through completion of the lower-division writing requirement? Are there differences in the observed quality of student writing as a function of their lower-division writing trajectory?

- Student Background and Writing: To what extent does the quality of student writing vary as a result of the student's language background?

The Lower-Division Writing Rubric

Over the course of the 2008-2009 academic year, the Lower-Division Writing Committee, comprised of all lower-division writing program directors, was convened to discuss the writing expectations across courses and develop a rubric that captured those expectations and the lower-division writing learning outcomes. The rubric developed to assess lower-division writing products, presented in Table 1, is an amalgamation of the FIP Assessment Matrix¹, a rubric used in a longitudinal study of writing at Stanford², and a third developed in early 2009 through AAC&U's VALUE Project.³ The Lower-Division Writing Rubric is comprised of 12 agreed-upon writing traits organized into four general categories of writing: (1) rhetorical knowledge, (2) critical thinking and analysis, (3) structure and organization, and (4) language use.

A random selection of 121 papers produced in the lower-division writing courses during the 2008-2009 academic year - Humanities Core (35), Writing 30: The Art of Writing: Poetry (7), Writing 31: The Art of Writing: Prose Fiction (7), Writing 39B: Critical Reading and Rhetoric (25), Writing 39C: Argument and Research (25), FIP (US12: Computer Games as Art, Culture and Technology, US13: Environmental Studies, and US15: Consciousness) (21) - were collected for the 2009 Lower-Division Writing Assessment Project.

Twelve readers, all with significant writing instruction experience and a strong commitment to better understanding the quality of student writing produced through completion of UCI's lower-division writing requirement, assessed a random sample of papers from the lower-division writing courses. All of the readers serve as instructors for lower-division writing courses at UCI. Six of the readers, Michael Andreasen, Marie Connors, Paul Dahlgren, Kat Eason, Peg Hesketh, and David Lacey, have served as instructors with the Composition Program. Two of the readers, Charlie Chubb and Margaux Cowden, have served as instructors with the FIP Program. Three of the readers, Brook Haley, Gretchen Short, and Katherine Walsh, have served as instructors with the Humanities Core Program. One of the readers, Luke Reid, has served as an instructor with Writing 30.

In preparation for the Lower-Division Writing Assessment, Jonathan Alexander, Campus Writing Coordinator and Lynda Haas, Associate Director for Composition, reviewed papers to locate sample papers reflecting a range of writing quality based on the rubric's twelve writing traits. On June 24, 2009, the first morning of the assessment, Jonathan Alexander and Lynda Haas led the readers in reviewing the goals of this assessment effort, the lower-division writing rubric, and 2 sample papers. Each subsequent day of the assessment, the group collectively reviewed and discussed 6 additional sample papers to strengthen agreement of what constitutes achievement of the 12 writing traits contained in the Lower-Division Writing Rubric. Because this assessment was predicated on the notion that student writing produced in lower-division writing should be able to demonstrate achievement of these 12 writing traits, neither the assignment prompts nor the course within which a given paper was produced were provided to the readers.

¹ The FIP Assessment Matrix was based on the matrix originally developed in 2006 to study the alignment of assignment prompts, grading rubrics, and student achievement in Writing 39C and Humanities Core aligned, both with each other and with stated course objectives and learning outcomes. More information about that assessment effort is available at <https://eee.uci.edu/programs/comp/assessment.html>.

² More information about the Stanford Study of Writing is available at <http://ssw.stanford.edu/>.

³ More information about the AAC&U's Value Project is available at <http://www.aacu.org/value/>.

Table 1: Lower Division Writing Rubric

	CATEGORY	1	2	3	4
Rhetorical Knowledge	Focus (purpose, thesis)	The writing is unfocused	Weak or inconsistent focus	Generally good focus	High degree of focus is evident throughout
	Sophistication of focus (purpose, thesis)	Frequent, insignificant, simplistic, and/or incoherent ideas	Some insignificant, simplistic, and/or incoherent ideas	Usually significant, sometimes sophisticated and/or nuanced ideas	Ideas are consistently significant, sophisticated, and/or nuanced
	Expertise on topic	Little or no familiarity with topic	Weak and inconsistent familiarity with topic	Generally good grasp of topic, sometimes expert	Illustrates expert knowledge throughout (positions itself as expert)
	Rhetorical Awareness (genre/audience)	Little or no rhetorical awareness of essay (genre) and academic (audience) expectations	Weak and inconsistent rhetorical awareness of genre and audience	Sometimes shows good rhetorical awareness of genre and audience	Consistently shows understanding of essay (genre) conventions and academic (audience) expectations
Critical Thinking and Analysis	Critical Thinking (analysis/ argumentation)	No critical thought; offers only opinion without evidence or recapitulates the works of others with no qualification	Weak and inconsistent demonstration of critical thought about topic and audience	Some evidence of critical thinking, multiple points of view, quantification of evidence	Depth of critical thinking is evident throughout, control of multiple points of view, has consistently evaluated, qualified the evidence used
	Source/evidence credibility and/or relevance	Sources and evidence chosen are not credible for genre/audience or relevant to subject	Sources/ evidence used are infrequently credible and/or relevant	Sources/evidence used are frequently credible and/or relevant	Sources/evidence used are credible and/or relevant
	Source/evidence integration	Fails to introduce source material	Simply and/or occasionally introduces some source material	Introduces most of the source material; at times, with some degree of complexity	Effectively introduces and deeply situates all of the source material
	Documentation	No documentation style is present, or what is evident is inappropriate	Documentation style is infrequently evident and/or inappropriate	Documentation style is sometimes evident and appropriate	Documentation style is evident and appropriate
Structure and Organization	Paragraphs	Paragraphs do not demonstrate internal coherence and organization	Paragraphs infrequently have internal coherence and organization	Paragraphs sometimes have internal coherence and organization	Each paragraph has a unitary purpose, internal structure, and coherence
	Structure, Order	Lacking organization; no evidence that ordering of paragraphs helps develop ideas	Ordering of paragraphs is somewhat logical, frequently formulaic (5par), rarely helping to develop ideas	Ordering of paragraphs is usually logical and sometimes supports the development of ideas	Organization enhances the development of ideas and is clearly effective
Language Use	Language correctness	Numerous errors and non-idiomatic sentence constructions frequently impede meaning	Errors and non-idiomatic sentence constructions sometimes impede meaning	Generally demonstrates error-free, -idiomatic prose that usually conveys meaning clearly	Consistently demonstrates error-free, -idiomatic prose that conveys meaning clearly
	Language eloquence	Tone, style, and word choice frequently detract from readability	Tone, style, and word choice rarely add to the reading experience and sometimes detract	Some credibility established via tone, style, word choice	Credibility established throughout via eloquence of tone, style, word choice

On the third day of the assessment, when all the readers were both familiar with and had achieved a high level of inter-rater agreement on the Lower-Division Writing Rubric writing traits, the writing produced in Writing 30 (Poetry) and 31 (Prose Fiction) was assessed. These papers were reviewed towards the end of the assessment because, unlike other lower-division writing courses, writing produced in Writing 30 and 31 is primarily creative or explicative in nature. After a review and discussion of 4 sample papers from Writing 30 and 31, the readers expressed some hesitation about the ability of the Lower-Division Writing Rubric to capture the quality of writing produced in these courses. Nonetheless, the readers reviewed and assessed the 14 papers randomly collected from both Writing 30 and 31 using the Lower-Division Writing Rubric. Upon completion of that read, the readers had a lengthy discussion which culminated with the view that the Lower-Division Writing Rubric, as it currently stands, does not allow for an accurate or complete

assessment of the writing quality demonstrated by writing products from Writing 30 and 31. Further conversations with Jonathan Alexander and the writing directors for Writing 30 and 31, coupled with the issues raised by the readers following their review of those papers, made clear that the Lower-Division Writing Rubric was designed primarily to assess writing that is research-driven, and therefore, was not an adequate tool for assessing student writing produced in Writing 30 and 31. As a result, the assessment results for Writing 30 and 31 writing products are not included in this report. Although this project found that the Lower-Division Writing Rubric was not flexible enough to effectively and accurately assess creative and/or explicative writing products, it was found to be an effective tool for assessing writing products that are research-driven writing.

Table 2 displays the reliability coefficients for both the 12 individual writing traits and the overall scores, by course and for all lower-division writing products assessed for this project.

Table 2: Alpha Reliability Coefficient Values by Writing Trait and Overall Assessment Score

	CATEGORY	Writing 39B (n=25)	Writing 39C (n=25)	FIP (n=21)	Humanities Core (n=35)	ALL Papers (n=106)
Rhetorical Knowledge	Focus (purpose, thesis)	.624	.789	.760	.398	.603
	Sophistication of focus (purpose, thesis)	.439	.719	.839	.667	.668
	Expertise on topic	.462	.705	.667	.486	.665
	Rhetorical Awareness (genre/audience)	.602	.596	.620	.641	.629
Critical Thinking and Analysis	Critical Thinking (analysis/ argumentation)	.465	.636	.700	.572	.607
	Source/evidence credibility and/or relevance	.562	.494	.782	.497	.631
	Source/evidence integration	.181	.585	.623	.422	.517
	Documentation	.471	.519	.746	.461	.667
Structure and Organization	Paragraphs	.692	.634	.794	.561	.658
	Structure, Order	.667	.611	.794	.536	.697
Language Use	Language correctness	.530	.648	.724	.671	.747
	Language eloquence	.768	.700	.640	.662	.747
OVERALL SCORE		.935	.941	.940	.935	.952

The overall reliability coefficients for lower-division writing products and for each of the courses suggest that the rubric has high overall reliability. At the same time, the reliability coefficient values for the twelve writing categories by course and across lower-division writing products suggest that further refinement is needed in order to strengthen inter-rater reliability. In reviewing the reliability coefficients by course, the findings suggest that the Lower-Division Writing Rubric is most reliable

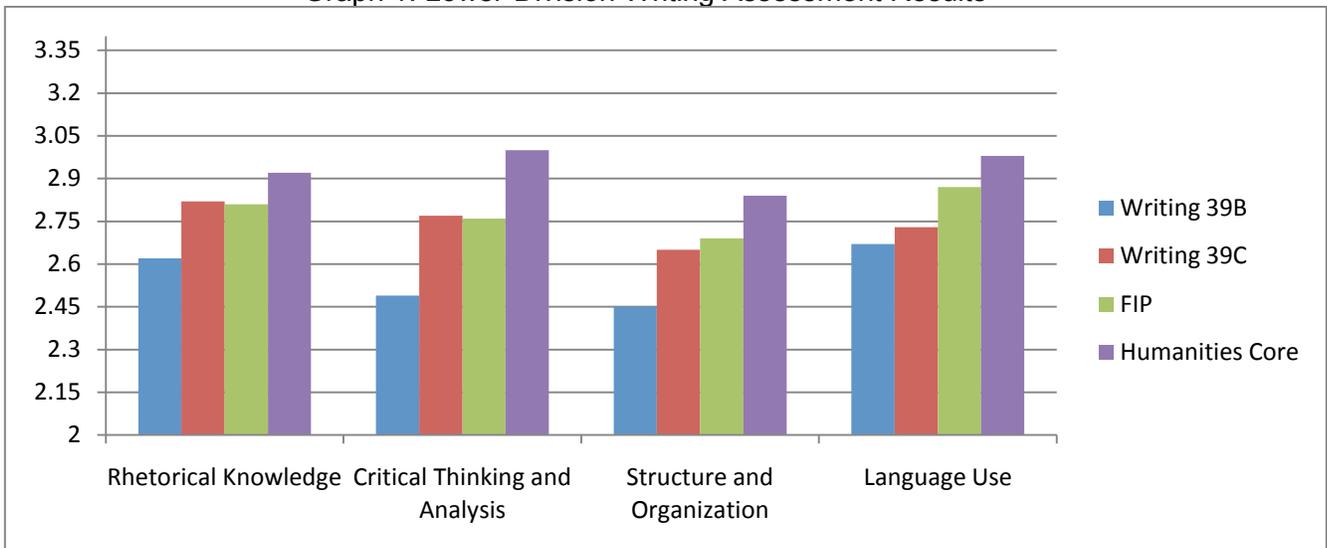
in its ability to capture the writing quality of FIP and Writing 39C papers, and least reliable in its ability to capture the quality of writing in Writing 39B and Humanities Core papers. When reviewing the reliability coefficients across courses, the values suggest that the rubric is most reliable in its ability to capture writing quality associated with the language use category and least reliable in its ability to capture writing quality associated with the focus writing trait and the critical thinking and analysis category.

The discussion with the readers upon completion of the lower-division writing assessment confirmed these findings. The readers spoke about the value of the rubric in capturing the overall quality of student writing products that are research-driven and its limitations in capturing the writing quality of creative and/or explicative writing products. They also noted that there is a high degree of overlap present between the categories of rhetorical knowledge and critical thinking and analysis. In discussing possible revisions to the Lower-Division Writing Rubric, the readers suggested that the rubric work to acknowledge the presence of critical thinking as a reflection of both rhetorical knowledge and the use of sources; in its current formulation, the rubric only associates with the use of sources.

Student Writing Skills

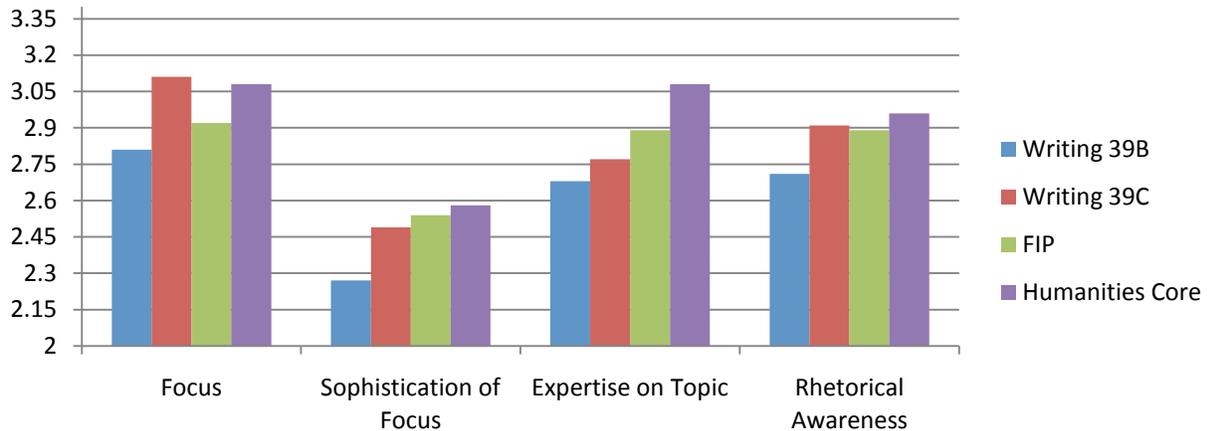
The lower-division writing quality results, as defined by the 4 overarching categories contained within the Lower-Division Writing Rubric, are presented in Graph 1.

Graph 1: Lower-Division Writing Assessment Results



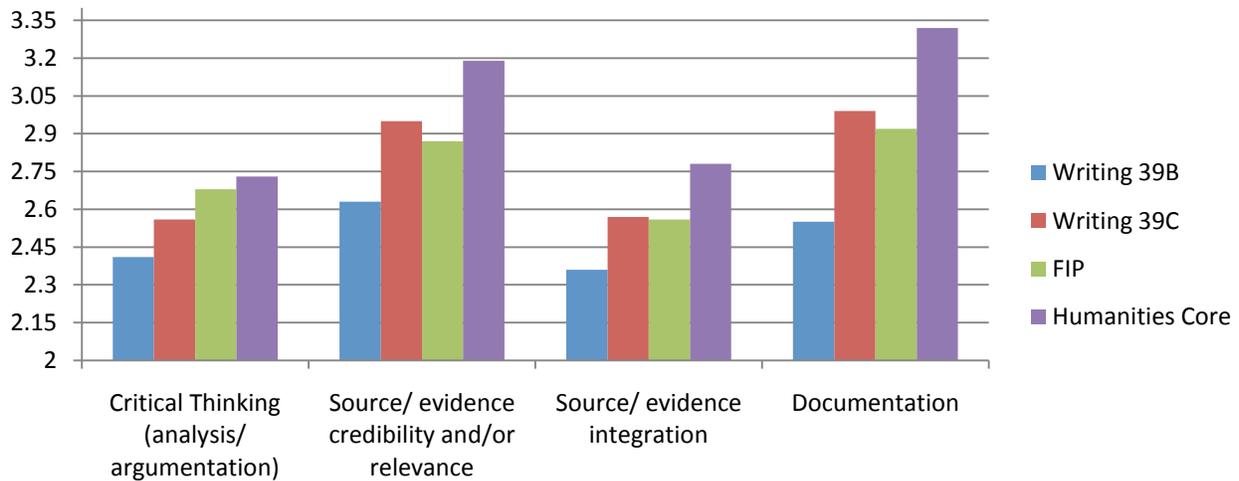
In reviewing the assessment results, the Humanities Core papers emerged as strongest in all four categories contained within the Lower-Division Writing Rubric. In contrast, as might be expected, the Writing 39B papers, which represent the first course in the lower-division writing requirement, emerged as weakest in all four categories. There are no discernable differences between the Writing 39C and FIP papers in writing quality when the results by writing category are reviewed. As these four categories represent 12 distinct writing traits, Graphs 2 through 5 detail the individual writing traits contained within the categories to allow for a more thorough analysis of differences in writing quality as a function of students’ lower-division writing trajectory.

Graph 2: Rhetorical Knowledge Category Results



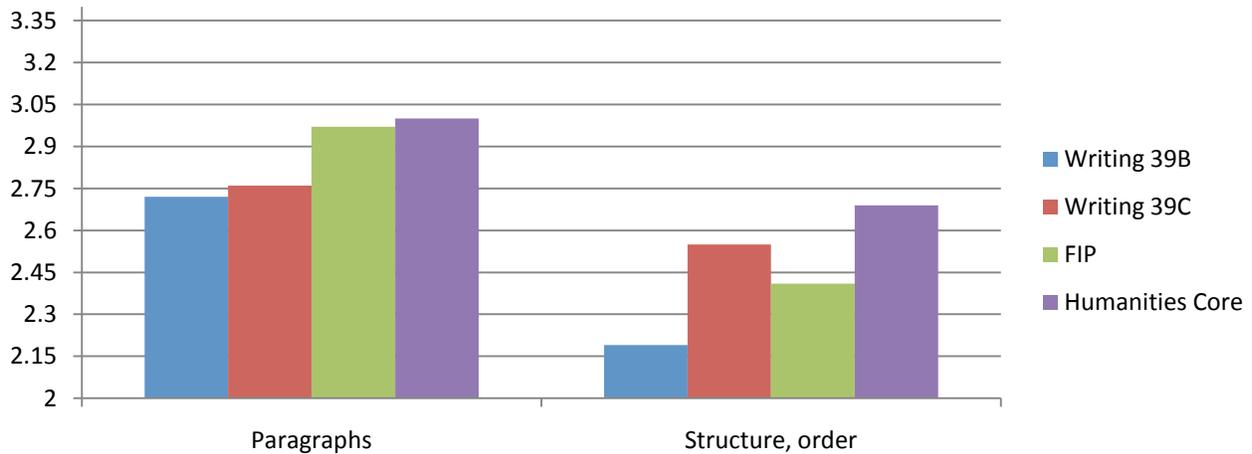
As displayed in Graph 2, the Humanities Core papers were strongest in three of the four rhetorical knowledge writing traits, while Writing 39C papers were strongest in the focus writing trait. The largest differences between course papers emerged in the expertise on topic writing trait, which may well be a reflection of the fact that both FIP and Humanities Core are year-long writing courses. Overall, the differences in writing quality associated with sophistication of focus and rhetorical awareness traits for those courses fulfilling the lower-division writing requirement appear to be fairly small.

Graph 3: Critical Thinking and Analysis Category Results



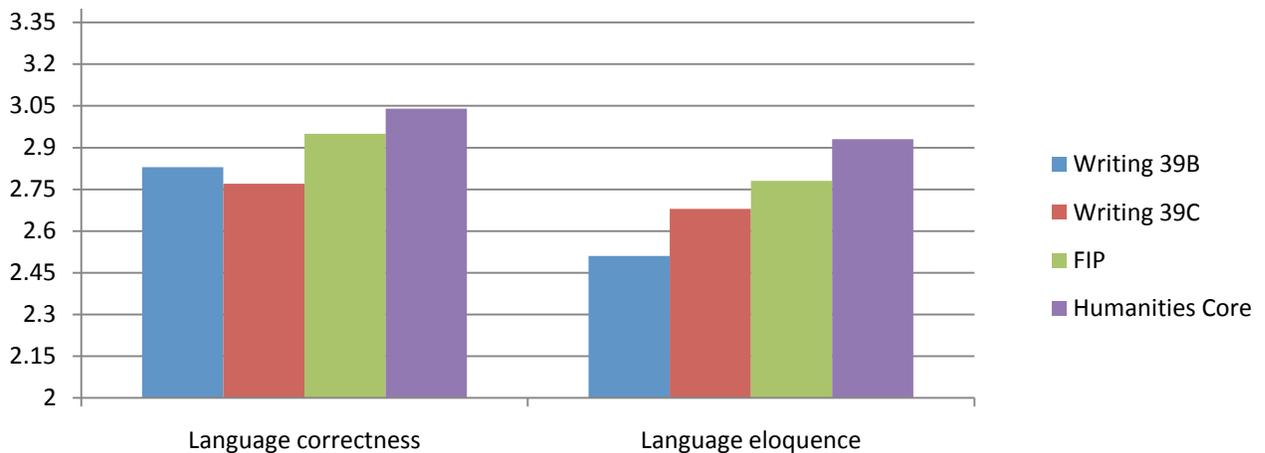
The results displayed in Graph 3 found the Humanities Core papers to be strongest in all four of the writing traits contained in the critical thinking and analysis category. The assessment results by writing trait appear to confirm that the differences in writing quality between Writing 39C and FIP papers are very small, with Writing 39C papers emerging as slightly stronger than FIP papers in three of the four writing traits contained in the critical thinking and analysis category.

Graph 4: Structure and Organization Category Results



The Humanities Core papers were found to be strongest in the two writing traits contained in the structure, organization category as displayed in Graph 4. It is interesting to note that the FIP papers emerged as stronger in the paragraph writing trait and weaker in the structure, order writing trait than the Writing 39C papers.

Graph 5: Language Use Category Results



Again, we find the Humanities Core papers to be strongest in the two writing traits contained in the language use category as presented in Graph 5. Here, Writing 39B papers emerged as stronger in the language correctness writing trait than the Writing 39C papers, which likely reflects the curricular content and focus of Writing 39B.

The assessment results displayed in Graphs 1 through 5 found the Humanities Core papers to be stronger than both the Writing 39C and FIP papers in all four categories. Regardless of the lower-division writing course, all papers were found to be strongest in the rhetorical knowledge category and weakest in the structure and organization category. Because the goal of this project was to better understand the quality of student writing as a function of the lower-division writing trajectory, an ANOVA was performed to determine if the observed differences in writing quality were statistically significant. The level of significance selected for this analysis was $p < .05$. The results, presented in Table 4, show that while there are no significant differences in the overall quality of student writing as a function of their lower-division writing trajectory, there are significant differences in writing quality associated with the critical thinking and analysis category. Humanities

Core papers were significantly better in two of the writing traits contained within the critical thinking and analysis category: source/evidence credibility and/or relevance and documentation. One might initially suspect this difference can be explained by the fact that Humanities Core is a year-long course. Since, however, Writing 39C papers achieved higher scores in these two writing traits than FIP, also a year-long course, course length does not seem to adequately explain this difference. An investigation into both the expectations across lower-division writing related to critical thinking and analysis, specifically concerned with both the selection and demonstration of the credibility/relevance of one's sources and the documentation style, coupled with an examination of the instructional approaches around these issues may be worthy of future study.

Table 4: Comparison of Mean Assessment Scores by Lower-Division Writing Trajectory

	CATEGORY	Writing 39C	FIP	Humanities Core
Rhetorical Knowledge	Focus (purpose, thesis)	3.11	2.92	3.08
	Sophistication of focus (purpose, thesis)	2.49	2.54	2.58
	Expertise on topic	2.77	2.89	3.08
	Rhetorical Awareness (genre/audience)	2.91	2.89	2.96
Critical Thinking and Analysis	Critical Thinking (analysis/ argumentation)	2.56	2.68	2.73
	Source/evidence credibility and/or relevance *	2.95	2.87	3.19
	Source/evidence integration	2.57	2.56	2.78
	Documentation **	2.99	2.92	3.32
Structure and Organization	Paragraphs	2.76	2.97	3.00
	Structure, Order	2.55	2.41	2.69
Language Use	Language correctness	2.78	2.95	3.04
	Language eloquence	2.68	2.78	2.93
TOTAL		33.12	33.38	35.38

**p<.01, *p<.05

In Tables 5A-D, the distribution of assessment scores assigned to each paper by the three readers are displayed. The results show that for all papers which fulfill the lower-division writing requirement, 50% of all reads yielded a score of 3 or higher in eleven of the twelve writing traits, with only one trait, structure and order, yielding a score of 3 or higher for 40% of all FIP paper reads.

Table 5A: Rhetorical Knowledge Category Score Distribution

Quality Scores by Trait	Focus	Sophistication of focus	Expertise on topic	Rhetorical Awareness
Writing 39C (25 papers, 75 reads)				
1	3 (4%)	5 (7%)	3 (4%)	1 (1%)
2	12 (16%)	28 (37%)	19 (25%)	13 (17%)
3	34 (45%)	40 (53%)	45 (60%)	53 (71%)
4	26 (35%)	2 (3%)	8 (11%)	8 (11%)
FIP (21 papers, 63 reads)				
1	0	3 (5%)	0	0
2	21 (33%)	29 (46%)	19 (30%)	17 (27%)
3	26 (41%)	25 (40%)	32 (51%)	36 (57%)
4	16 (25%)	6 (10%)	12 (19%)	10 (16%)
Humanities Core (35 papers, 105 reads)				
1	1 (1%)	4 (4%)	1 (1%)	4 (4%)
2	16 (15%)	44 (42%)	14 (13%)	18 (17%)
3	61 (58%)	48 (46%)	66 (63%)	61 (58%)
4	27 (26%)	9 (9%)	24 (23%)	22 (21%)

Table 5B: Critical Thinking and Analysis Category Score Distribution

Quality Scores by Trait	Critical Thinking	Source/ evidence credibility and/or reliability	Source/ evidence integration	Documentation
Writing 39C (25 papers, 75 reads)				
1	3 (4%)	0	0	1 (1%)
2	30 (40%)	13 (17%)	33 (44%)	11 (15%)
3	40 (53%)	53 (71%)	41 (55%)	51 (68%)
4	2 (3%)	9 (12%)	1 (1%)	12 (16%)
FIP (21 papers, 63 reads)				
1	3 (5%)	0	0	0
2	23 (37%)	15 (24%)	31 (49%)	19 (30%)
3	28 (44%)	41 (65%)	29 (46%)	30 (48%)
4	9 (14%)	7 (11%)	3 (5%)	14 (22%)
Humanities Core (35 papers, 105 reads)				
1	4 (4%)	0	2 (2%)	0
2	33 (31%)	8 (8%)	31 (30%)	5 (5%)
3	56 (53%)	69 (66%)	60 (57%)	61 (58%)
4	12 (11%)	28 (27%)	12 (11%)	39 (37%)

Table 5C: Structure and Organization Category Score Distribution

Quality Scores by Trait	Paragraphs	Structure, Order
Writing 39C (25 papers, 75 reads)		
1	2 (3%)	4 (5%)
2	19 (25%)	30 (40%)
3	49 (65%)	37 (49%)
4	5 (7%)	4 (5%)
FIP (21 papers, 63 reads)		
1	1 (2%)	7 (11%)
2	14 (22%)	30 (48%)
3	34 (54%)	19 (30%)
4	14 (22%)	7 (11%)
Humanities Core (35 papers, 105 reads)		
1	1 (1%)	4 (4%)
2	22 (21%)	37 (35%)
3	58 (55%)	52 (50%)
4	24 (23%)	12 (11%)

Table 5D: Language Use Category Score Distribution

Quality Scores by Trait	Language correctness	Language eloquence
Writing 39C (25 papers, 75 reads)		
1	1 (1%)	2 (3%)
2	19 (25%)	25 (33%)
3	51 (68%)	44 (59%)
4	4 (5%)	4 (5%)
FIP (21 papers, 63 reads)		
1	0	0
2	14 (22%)	22 (35%)
3	38 (60%)	33 (52%)
4	11 (17%)	8 (13%)
Humanities Core (35 papers, 105 reads)		
1	0	1 (1%)
2	13 (12%)	18 (17%)
3	75 (71%)	73 (70%)
4	17 (16%)	13 (12%)

Overall, the findings suggest that students are able to demonstrate the level of quality in their writing that would be expected upon completion of the lower-division writing requirement, with the majority of papers achieving a score of 3 or more for each of the 12 writing traits. Based on the assessment results, students who fulfilled the lower-division writing requirement through Writing 39C and/or FIP were strongest in the rhetorical knowledge category, while students who completed the lower-division writing requirement through Humanities Core were strongest in the

critical thinking and analysis category. Statistically significant differences in two of the 12 writing traits were observed the quality of writing students produced as a function of the lower-division writing trajectory. These differences, when considered in light of the reliability coefficients for these traits, suggest the need for greater clarity around the expectations related to critical thinking and analysis; Further study on this issue is needed as it is unclear if these quality scores reflect differences in writing instruction, in the scope of the course’s writing assignment related to the utilization and selection of evidence, or the students who choose one lower-division writing trajectory over another. Most importantly, the results of this project suggest that students are able to demonstrate the quality of writing expected upon completion of the lower-division writing requirement. As noted by the readers at the conclusion of the assessment, nearly all the papers assessed had a clear focus and effectively developed an argument in support of that focus.

Student Background and Writing

In order to better understand the writing quality in the sample of Writing 39C, FIP, and Humanities Core papers assessed for this project, data was collected about students’ language background. Table 6 shows that nearly half of the papers assessed for this project were produced by students who grew up in households where either only another language or both English and another language were spoken.

Table 6: Language Background by Lower-Division Writing Course

Language Status	Writing 39C	FIP	Humanities Core	ALL
English Only	13 (52%)	11 (52%)	18 (51%)	42 (52%)
English & Another Language/Another Language Only	12 (48%)	10 (48%)	17 (49%)	39 (48%)

An analysis of variance, the results of which are displayed in Table 7, was performed to identify the effects of language background on each of the twelve individual writing categories and the overall writing assessment scores. The level of significance selected for this analysis was $p < .05$. Although the average scores for all twelve writing traits were consistently higher for English only students, the only significant difference in writing quality that emerged as a function of students’ language background was associated with the language eloquence writing trait.

Table 7: Mean Writing Assessment Values as a Function of Language Status

	CATEGORY	English Only	English & Another/ Another Only
Rhetorical Knowledge	Focus (purpose, thesis)	3.02	2.94
	Sophistication of focus (purpose, thesis)	2.50	2.42
	Expertise on topic	2.94	2.84
	Rhetorical Awareness (genre/audience)	2.88	2.81
Critical Thinking and Analysis	Critical Thinking (analysis/ argumentation)	2.64	2.55
	Source/evidence credibility and/or relevance	2.98	2.89
	Source/evidence integration	2.60	2.54
	Documentation	3.01	2.92
Structure and Organization	Paragraphs	2.89	2.77
	Structure, Order	2.50	2.42
Language Use	Language correctness	2.89	2.74
	Language eloquence**	2.82	2.58
TOTAL		33.67	32.42

**p<.01, *p<.05

Conclusions and Recommendations

The 2009 Lower-Division Writing Assessment was designed with three goals in mind: (1) to assess the degree to which the Lower-Division Writing Rubric captured shared writing expectations across lower-division writing courses, (2) to assess the quality of student writing produced through the different trajectories for completion of the lower-division writing requirement, and (3) to determine whether students' language background impacts the quality of student writing.

The Lower-Division Writing Assessment Rubric, an amalgamation of both nationally and locally used writing rubrics, proved to be a useful tool for assessing the quality of research-based writing, which is the primary writing genre produced in completion of UCI's lower-division writing requirement. For writing products that are creative or explicative in nature, such as those produced in Writing 30 or Writing 31, the rubric proved to be an inadequate tool for capturing and assessing writing quality. In reviewing the reliability coefficients, the rubric proved to be most reliable in capturing the writing quality of Writing 39C and FIP papers, and most reliable in capturing writing quality associated with the language use category. While the rubric was found to be a reliable tool for research-based writing products, modifications will further strengthen its ability

to effectively capture the quality of student writing. The readers noted a high degree of overlap between the rhetorical knowledge and critical thinking and analysis categories, noting that writing products can demonstrate critical thinking both through the effective communication of an idea (rhetorical knowledge) and the use of evidence to enhance the effectiveness of that communication (critical thinking and analysis); in its current formulation, the rubric only associates critical thinking with the critical thinking and analysis category. The variability in reliability coefficients by course suggests that rubric modifications here may prove helpful to further understanding student writing skills as well as the shared and unique gains students achieve as a function of their lower-division writing trajectory.

The review of student writing products found that students are able to demonstrate the quality of writing expected upon completion of the lower division writing requirement. While writing quality was fairly similar across lower-division writing trajectories, Humanities Core papers achieved the highest scores in 11 of the 12 writing traits contained within the lower-division writing rubric. Significant differences were found in 2 of the writing traits contained within the critical thinking and analysis category with Humanities Core papers demonstrating a higher level of achievement in the source/evidence credibility and/or relevance and the documentation writing traits. Papers produced in Writing 39C and FIP achieved nearly identical assessment scores, with FIP papers being stronger in the language use category and Writing 39C papers being stronger in the critical thinking and analysis category. Overall, all papers produced in fulfillment of the lower-division writing requirement were strongest in the rhetorical knowledge category and weakest in the structure and organization category. These results suggest that while different lower-division writing trajectories seem to yield similar overall writing gains, there are some differences worthy of further investigation. The results of this project unfortunately do not clarify the degree to which the observed differences in writing quality are a function of course length, instructional methods, or characteristics of the student population.

Finally, writing quality differed as a result of students' language background. Overall, papers produced by students who grew up in households speaking only English achieved slightly higher assessment scores on all twelve writing traits contained within the lower-division writing rubric. Significant differences in writing quality were observed, however, in only one of the twelve writing traits, language eloquence. While these results are not surprising, in that we would expect for students who grew up in households where English is the primary language to demonstrate higher levels of achievement in writing quality, it is important to note that the differences as a function of language status are rather small, and only in one instance were found to be statistically significant.

In light of these findings, the following recommendations emerge:

While the Lower-Division Writing Rubric proved to be a valuable tool for assessing research-based writing products. Refinements to the rubric that allow both for greater clarity and distinctiveness to be made between the skills associated with rhetorical knowledge and analysis and evidence will help to strengthen the rubric's effectiveness in capturing writing quality among research-based writing products. Equally, and perhaps more importantly, because the rubric was found to be ineffective for assessing creative or explicative writing products this project raised questions about the shared writing expectations across genres, how to effectively capture these, and what modifications can be made to the rubric that both capture shared expectations and illuminate the unique gains achieved as a function of students' lower-division writing trajectory.

In addition to any modifications which may be made to the rubric, a greater understanding of the ways in which courses in fulfillment of the lower-division writing requirement and their assignments provide students with the opportunity to learn, practice, achieve, and demonstrate the agreed upon lower-division writing skills and abilities is needed.

There are some differences in the quality of writing produced by students as a result of their language background. This project found that students who grew up in households speaking either only another language or both English and another language achieved slightly lower writing quality scores, with significant differences emerging around the language eloquence writing trait. While these findings suggest that language background does not seem to be impacting student writing quality as much as perhaps has been generally assumed to be the case, it is recommended that writing quality as a function of students' language background continue to be monitored in future writing assessment projects.