

**University of California, Irvine**

**2011 Assessment of  
Lower-Division Writing at UCI**

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## **Introduction**

This report presents the findings from the 2011 Assessment of Lower-Division Writing at UCI. A random selection of 90 papers written in fulfillment of the lower-division writing requirement were collected in Spring 2011 and assessed to determine the quality of student writing achieved through completion of the lower-division writing requirement at UCI. Differences as a function of lower-division writing trajectory as well as student characteristics were examined.

## **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 language and style conventions category and weakest in the category of development, evidence, sources, and research. The review of student writing products found that students are able to demonstrate some to satisfactory evidence of writing achievement expected upon completion of the lower-division writing requirement.

Humanities Core papers achieved the highest assessment scores in all 12 writing traits contained within the Lower-Division Writing Assessment Rubric, with significant differences observed in 3 of the writing traits, source/evidence: integration, language: eloquence and documentation. Students who report speaking only English achieved higher scores than their non-English-only counterparts in all 12 of the writing traits contained in the Lower-Division Writing Assessment Rubric with statistically significant difference observed in the language: correctness writing trait. The Lower-Division Writing Assessment Rubric was found to have high overall reliability.

Overall, the results from this project suggest that while different lower-division writing trajectories seem to yield similar overall writing gains, like those efforts initiated in 2009 and 2010, there exist meaningful differences in writing quality related to the selection/use/integration and documentation of sources as well as language eloquence as a function of lower-division writing trajectory.

## **Assessment Design**

In 2011, the Campus Writing Coordinator sought to assess student writing produced through completion of the lower-division writing requirement for the third consecutive year. The 2011 Lower-Division Writing Assessment effort sought to build upon the efforts of the previous two years to refine and solidify the Lower-Division Writing Assessment Rubric, collect information about the quality of student writing produced through the completion of the lower-division writing requirement, and determine whether student's first language impacts the quality of student writing. With these goals in mind, this project sought to address the following questions:

- **Writing Rubric:** Does the Lower-Division Writing Assessment Rubric capture the shared writing expectations resulting from completion of the lower-division writing requirement? Is the rubric a reliable instrument?
- **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**

In response to the findings and recommendations from the 2010 Lower-Division Writing Assessment effort, modifications were made to the rubric's quality labels. The four levels of

quality, (1) insufficient, (2) some, (3) satisfactory, and (4) proficient, as well as the descriptors for each of the rubric's twelve writing traits are presented below.

Table 1: Lower Division Writing Assessment Rubric

	<b>CATEGORY</b>	<b>4 Proficient</b>	<b>3 Satisfactory</b>	<b>2 Some</b>	<b>1 Insufficient</b>
<b>Rhetorical Knowledge</b>	Focus	High degree of focus is evident throughout	Generally good focus	Weak or inconsistent focus	No clear focus
	Thesis	Clearly significant, sophisticated, and/or nuanced thesis	Generally significant, sophisticated and/or nuanced thesis	Somewhat significant, sophisticated, and/or nuanced, but flawed	Insignificant, simplistic, and/or incoherent thesis
	Expertise on Topic	Illustrates expert knowledge throughout (positions him/herself as expert)	Generally good grasp of topic, sometimes expert	Intermittent or inconsistent familiarity with topic	Limited or no familiarity with topic
	Rhetorical Awareness (genre/audience)	Consistently shows understanding of essay (genre) conventions and academic (audience) expectations	Generally shows good rhetorical awareness of genre and audience	Inconsistent rhetorical awareness of genre and audience	Little or no rhetorical awareness of essay (genre) and academic (audience) expectations
<b>Development, Evidence, Sources, and Research</b>	Critical Thinking: Development of Ideas	Critical thinking is consistently evident throughout the development of the essay; multiple points of view have clearly been considered	Some evidence of critical thinking is evident in the development of the essay; multiple points of view are considered	Inconsistent demonstration of critical thought in the development of the essay; multiple points of view not clearly evident	Little or no critical thought; development of essay is based on opinion or basic summary; may recapitulate the work of others without qualification
	Sources/Evidence: Credibility and/or Relevance	Sources/evidence used are credible and/or relevant	Sources/evidence used are generally credible and/or relevant	Sources/evidence used are intermittently credible and/or relevant	Sources and evidence chosen are not credible for genre/audience or relevant to subject
	Sources/Evidence: Integration	Effectively introduces and situates source material	Introduces and situates most of the source material	Sporadically introduces some source material	Fails to introduce source material
<b>Structure, Organization</b>	Paragraphs	Paragraphs have a unitary purpose, internal coherence and organization	Paragraphs sometimes have internal coherence and organization	Paragraphs inconsistently demonstrate internal coherence and organization	Paragraphs do not demonstrate internal coherence and organization
	Structure, Order	Organization enhances the development of ideas and is effective	Ordering of paragraphs is generally logical and generally supports the development of ideas	Ordering of paragraphs is somewhat logical, but may also be formulaic or sporadic in helping to develop ideas	Lacking organization; ordering of paragraphs does not help develop ideas
<b>Language &amp; Style Conventions</b>	Language: Correctness	Error-free, idiomatically correct prose that conveys meaning clearly	Generally error-free, -idiomatic prose that usually conveys meaning clearly	Errors and non-idiomatic sentence constructions intermittently impede meaning	Errors and non-idiomatic sentence constructions impede meaning
	Language: Eloquence	Tone, style, and word choice is credible and enhances the reading experience.	Tone, style, and word choice is generally credible and adds to the reading experience	Tone, style, and word choice are sometimes detracting and inconsistently add to the reading experience	Tone, style, and word choice detract from readability
	Documentation	Documentation style is evident and appropriate	Documentation style is generally evident and appropriate	Documentation style is inconsistently evident and/or inappropriate	Documentation style is absent or inappropriate

A random selection of 90 papers produced in the second lower-division writing course were collected during the Spring Quarter of the 2010-11 academic year - Humanities Core (30), Writing 39C: Argument and Research (30), FIP (US13: Environmental Studies, and US15: Consciousness) (30).

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. Seven of the readers, Libby Bevans, Chieh Chieng, Kat Eason, Loren Eason, Alberto Gullaba, Dan Matlock, and Matt Seybold, have served as instructors with the Composition Program. An eighth reader, Abraham Romney, has served as an instructor with both the FIP and Composition Programs. Two readers, Brook Haley, and Susan Morse, have served as instructors with the Humanities Core Program. The eleventh reader, Brian Thill, serves as the Writing Director for the Humanities Core Program. The twelfth reader, Daniel Gross, is an Associate Professor of English and Director of UCI's Composition Program.

In preparation for the Lower-Division Writing Assessment, on August 25 and 26, 2011, the Campus Writing Coordinator reviewed papers produced in the second lower-division writing course and selected 8 papers reflecting a range of writing quality based on the rubric's twelve writing traits to be used in the training of the assessment readers.

On August 25, 2011, the first morning of the assessment, the Campus Writing Coordinator led a group discussion of the projects' goals and the lessons learned from the previous two years' assessment efforts. Following this discussion, the readers reviewed the assessment rubric and assessed 4 sample papers. The assessment readers then had a lengthy discussion about the quality scores assigned to each of the sample papers in order to achieve consensus on the elements within the papers which demonstrated evidence of achievement of the twelve writing categories contained within the Lower-Division Writing Assessment Rubric. There was such a high degree of consistency in the assessment scores the readers gave to these four sample papers that no additional sample papers were reviewed as part of this assessment effort. Because this assessment was predicated on the notion that student writing produced in fulfillment of the lower-division writing requirement 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.

After the training session on the morning of August 25, 2011, readers were divided into 3 reading teams, with all members of a given team reading the same set of papers. All papers were read by four readers, with each individual reader assigning a score for each writing trait contained within the rubric. As papers were scored, Natalie Schonfeld monitored and tabulated the results. In order to strengthen inter-rater reliability, for any paper where the difference between the overall scores assigned by the four readers was greater than 5, one of the readers was asked to re-read the paper in question to confirm the score they initially assigned to the paper in question.

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

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

	Writing Trait	<b>Writing 39C (n=30)</b>	<b>FIP (n=30)</b>	<b>Humanities Core (n=30)</b>	<b>ALL (n=90)</b>
Rhetorical Knowledge	Focus	.732	.610	.668	.682
	Thesis	.681	.663	.469	.622
	Expertise on topic	.722	.648	.681	.694
	Rhetorical Awareness (genre/audience)	.696	.691	.709	.703
Sources/ Evidence	Critical Thinking: Development of Ideas	.769	.699	.587	.693
	Source/Evidence: Credibility and/or Relevance	.605	.723	.718	.697
	Source/Evidence: Integration	.615	.709	.614	.718
Structure, Organization	Paragraphs	.709	.607	.501	.629
	Structure, Order	.674	.597	.555	.612
Language & Style Conventions	Language: Correctness	.569	.542	.480	.540
	Language: Eloquence	.697	.281	.464	.557
	Documentation	.483	.692	.790	.690
<b>OVERALL SCORE</b>		<b>.804</b>	<b>.758</b>	<b>.727</b>	<b>.778</b>

The overall reliability coefficients for the 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 Assessment Rubric is most reliable in its ability to capture the writing quality of Writing 39C papers, and least reliable in its ability to capture the writing quality of 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 sources/evidence category and least reliable in its ability to capture writing quality associated with the language and style conventions category.

At the conclusion of the Lower-Division Writing Assessment, all readers were asked to provide feedback about this assessment experience and the Lower-Division Writing Assessment Rubric. Much of the discussion concerned critical thinking and the ways in which different lower-division

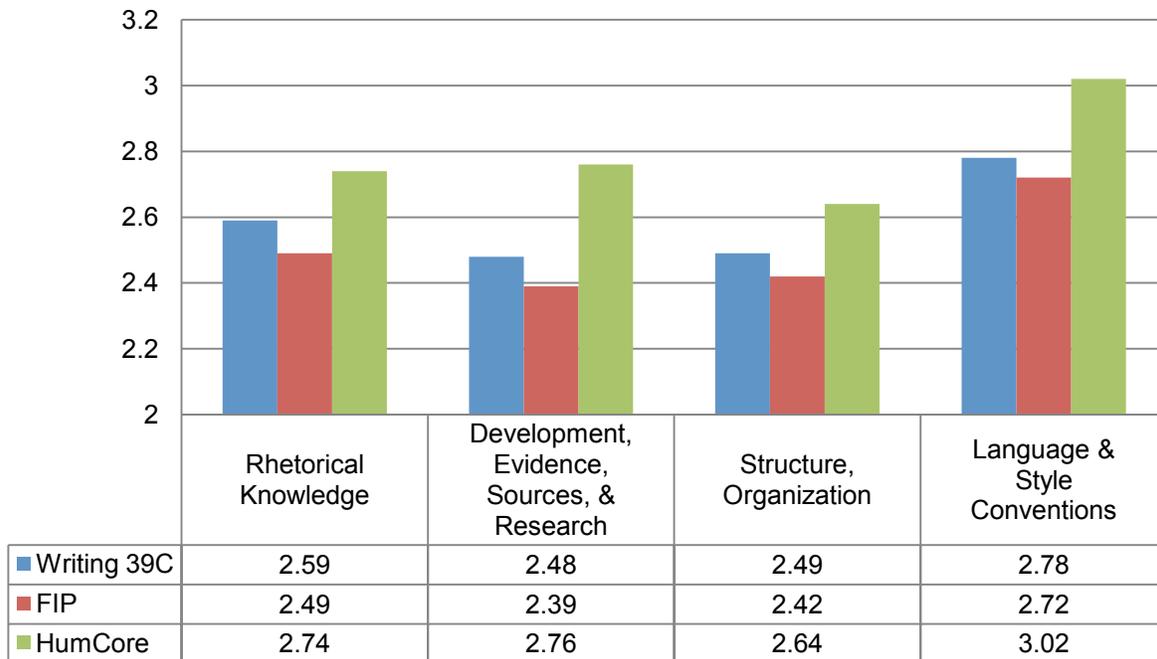
writing trajectories seem to focus on different aspects of critical thinking, such as articulating different perspectives, critiquing perspectives, and/or engaging with different perspectives. In general, there was consensus among the readers that there needs to be greater agreement about what constitutes critical thinking in lower-division writing, the degree to which students are expected to expose multiple view points in their writing, engage with those views, and insert their own perspective into the conversation. There was also discussion about the use of sources and strategies for teaching students the process for evaluating sources was discussed and shared among the readers.

In discussing possible revisions to the Lower-Division Writing Assessment Rubric, the readers suggested clarifying the expectations associated with the demonstration of critical thinking. There was also some discussion about the usefulness of the rhetorical awareness writing trait and some concerns raised about the ways in which this trait overlaps with other traits in the Lower-Division Writing Assessment Rubric.

**Student Writing Skills**

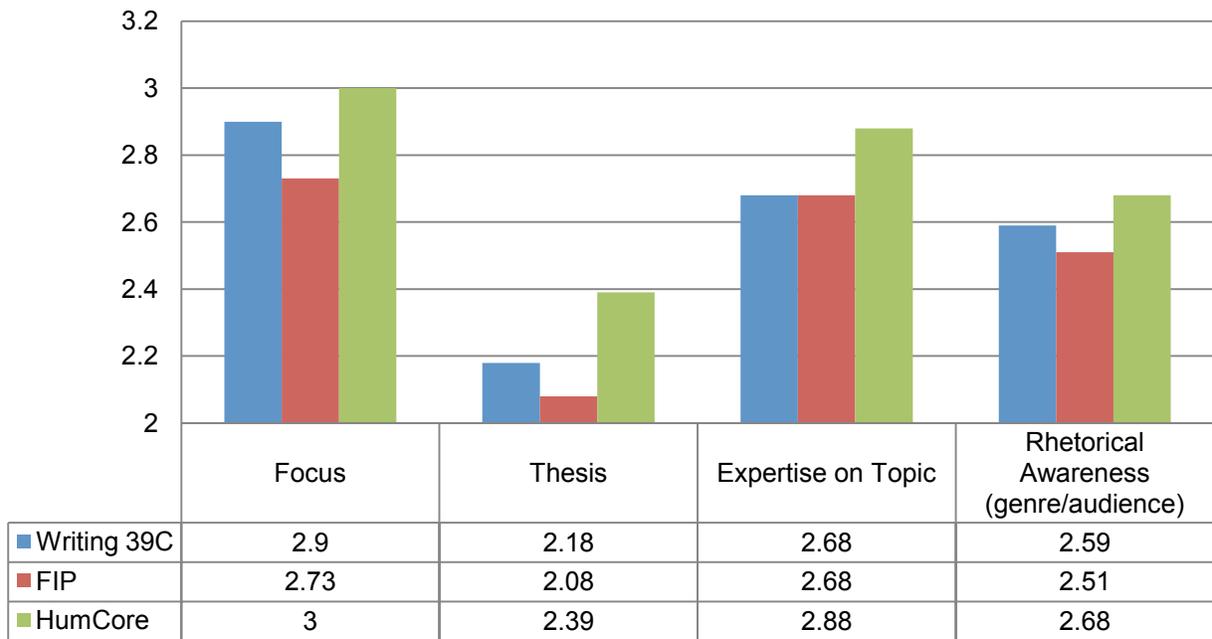
The lower-division writing quality results, as defined by the 4 overarching categories contained within the Lower-Division Writing Assessment Rubric, are presented in Graph 1.

Graph 1: Lower Division Writing Assessment Results



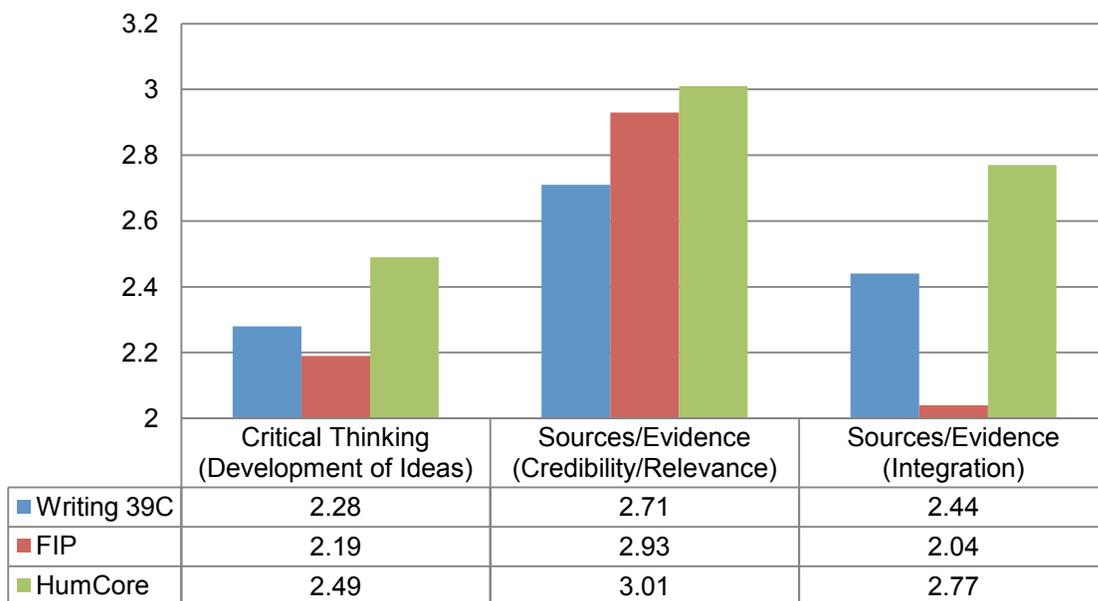
In reviewing the assessment results, the Humanities Core papers emerged as strongest in all four categories contained within the Lower-Division Writing Assessment Rubric. In contrast, the FIP papers emerged as weakest in all four categories. As these four categories represent 12 distinct writing traits, Graphs 2 through 5 detail the individual writing traits contained within the four 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



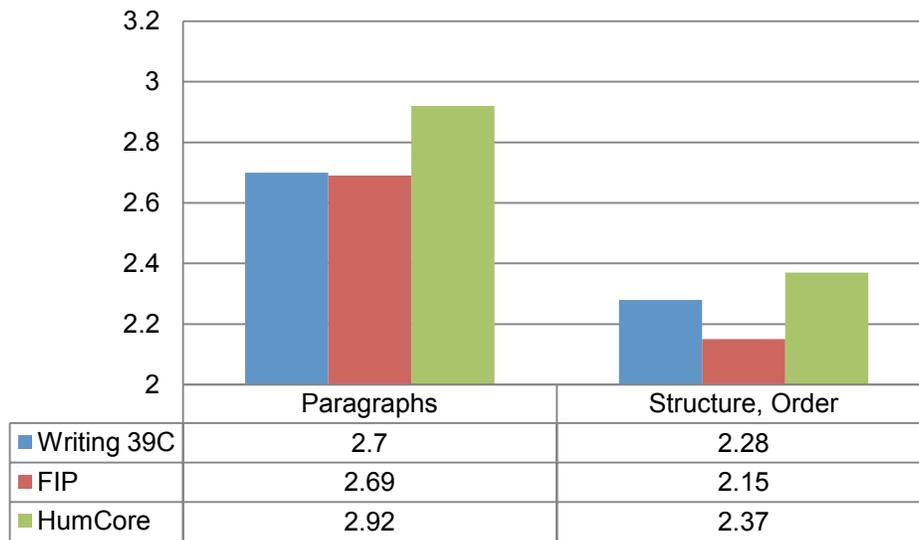
As displayed in Graph 2, the Humanities Core papers were strongest in all four rhetorical knowledge writing traits, while FIP papers were weakest in all four of these writing traits.

Graph 3: Development, Evidence, Sources & Research Category Results



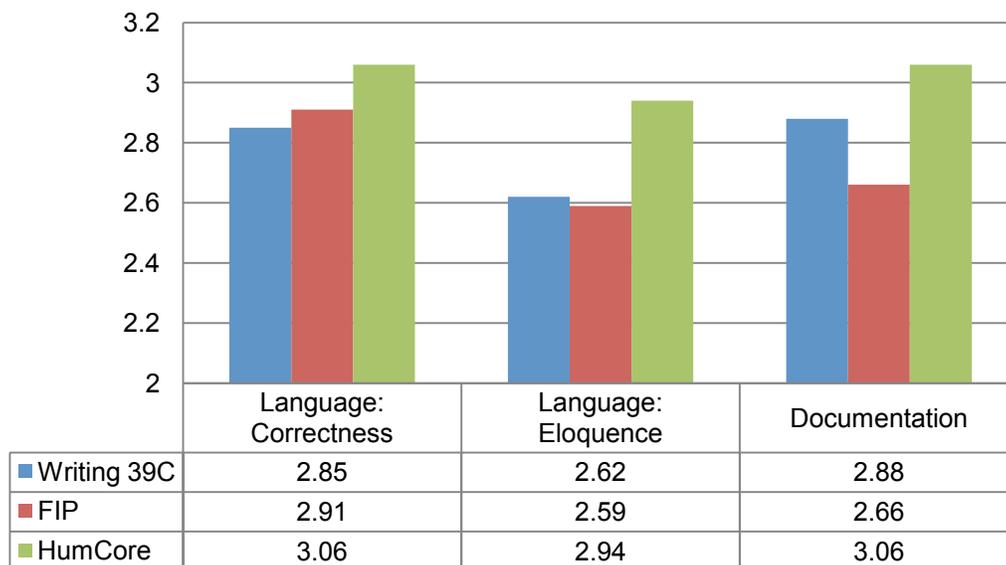
The results displayed in Graph 3 found the Humanities Core papers to be strongest in all three writing traits contained in the development, evidence, sources and research category. The FIP papers were found to be weakest in two of the three writing traits contained within this category.

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 all the papers were assessed as being stronger in the paragraph writing trait and weaker in the structure, order writing trait. This pattern has consistently emerged in all Lower-Division Writing Assessment efforts.

Graph 5: Language and Style Conventions Category Results



The Humanities Core papers were found to be strongest in the three writing traits contained in the language and style conventions category as presented in Graph 5. All papers were stronger in the language correctness trait than in the language eloquence trait.

The assessment results displayed in Graphs 1 through 5 found the Humanities Core papers to be stronger than 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 language and style conventions category. The Writing 39C and FIP papers were weakest in the development, evidence, sources, and research category while the Humanities Core papers were weakest in the structure and organization category. This same pattern emerged in the 2010 Lower-Division Writing Assessment effort.

Because one of the goals 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 3, 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 both the sources/evidence and language categories. Humanities Core papers were significantly stronger in the source/evidence: integration writing trait as well as two of the writing traits contained within the language and style conventions category: language: eloquence and documentation. There is, however, no evidence to suggest that this difference is a result of the fact that Humanities Core is a year-long course. For all three writing traits where significant differences were observed, the Writing 39C papers achieved higher scores than those papers produced in FIP, also a year-long course. As this marks the third year where significant differences were observed in the source/evidence and language categories, it would seem that students are able to demonstrate achievement of these writing traits with differing degrees of success as a function of their lower-division writing trajectory. Investigation into both the expectations and instructional approaches associated with the selection, demonstration of the credibility/relevance, and integration of one's sources as well as the documentation of sources is worthy of discussion and study by the Lower-Division Writing Committee.

Table 3: Comparison of Mean Assessment Scores by Lower-Division Writing Trajectory

	CATEGORY	Writing 39C (n=30)	FIP (n=30)	Humanities Core (n=30)
Rhetorical Knowledge	Focus	2.9	2.73	3
	Thesis	2.18	2.08	2.39
	Expertise on topic	2.68	2.68	2.88
	Rhetorical Awareness (genre/audience)	2.59	2.51	2.68
Sources/ Evidence	Critical Thinking: Development of Ideas	2.28	2.19	2.49
	Sources/Evidence: Credibility and/or Relevance	2.71	2.93	3.01
	Sources/Evidence: Integration**	2.44	2.04	2.77
Structure & Organization	Paragraphs	2.7	2.69	2.92
	Structure, Order	2.28	2.15	2.37
Language & Conventions	Language: Correctness	2.85	2.91	3.06
	Language: Eloquence **	2.62	2.59	2.94
	Documentation *	2.88	2.66	3.06
<b>OVERALL SCORE</b>		31.09	30.15	33.57

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

In Tables 4A-D, the distribution of assessment scores assigned to each paper by the readers is displayed. These results show that 50% or more of all Humanities Core paper reads yielded a score of 3 or higher (satisfactory or proficient) in six of the twelve writing traits. In contrast, 50% of all Writing 39C and FIP paper reads yielded a score of 3 or higher (satisfactory or proficient) in only two of the twelve writing traits.

Table 4A: Rhetorical Knowledge Category Score Distribution

Quality Scores by Trait	Focus	Thesis	Expertise on topic	Rhetorical Awareness
<b>39C Spring</b> (30 papers, 120 reads)				
Insufficient (1-1.99)	1 (3%)	10 (33%)	2 (6%)	3 (10%)
Some (2-2.99)	11	16 (53%)	17 (57%)	15 (50%)
Satisfactory (3-3.99)	17	4 (13%)	11 (37%)	10 (33%)
Proficient (4)	1 (3%)			
<b>FIP</b> (30 papers, 120 reads)				
Insufficient (1-1.99)		13 (43%)	1 (3%)	2 (7%)
Some (2-2.99)	23	14 (47%)	22 (73%)	23 (77%)
Satisfactory (3-3.99)	5 (17%)	3 (10%)	6 (20%)	4 (13%)
Proficient (4)	2 (7%)		1 (3%)	1 (3%)
<b>Humanities Core</b> (30 papers, 120 reads)				
Insufficient (1-1.99)	1 (3%)	6 (20%)	1 (3%)	4 (13%)
Some (2-2.99)	11	18 (60%)	13 (43%)	15 (50%)
Satisfactory (3-3.99)	16	6 (20%)	15 (50%)	10 (33%)
Proficient (4)	2 (7%)		1 (3%)	1 (3%)

Table 4B: Development, Evidence, Sources, and Research Category Score Distribution

Quality Scores by Trait	Critical Thinking: Development of Ideas	Sources/ Evidence: Credibility and/or Relevance	Sources/ Evidence: Integration
<b>39C Spring</b> (30 papers, 120 reads)			
Insufficient (1-1.99)	9 (30%)	1 (3%)	6 (20%)
Some (2-2.99)	14 (47%)	20 (67%)	15 (50%)
Satisfactory (3-3.99)	7 (23%)	8 (27%)	9 (30%)
Proficient (4)		1 (3%)	
<b>FIP</b> (30 papers, 120 reads)			
Insufficient (1-1.99)	8 (27%)	1 (3%)	12 (40%)
Some (2-2.99)	18 (60%)	13 (43%)	15 (50%)
Satisfactory (3-3.99)	4 (13%)	15 (50%)	3 (10%)
Proficient (4)		1 (3%)	
<b>Humanities Core</b> (30 papers, 120 reads)			
Insufficient (1-1.99)	7 (23%)		3 (10%)
Some (2-2.99)	14 (47%)	12 (40%)	16 (53%)
Satisfactory (3-3.99)	9 (30%)	15 (50%)	10 (33%)
Proficient (4)		3 (10%)	1 (3%)

Table 4C: Structure and Organization Category Score Distribution

Quality Scores by Trait	Paragraphs	Structure, Order
<b>39C Spring</b> (30 papers, 120 reads)		
Insufficient (1-1.99)	2 (6%)	6 (20%)
Some (2-2.99)	15 (50%)	18 (60%)
Satisfactory (3-3.99)	13 (43%)	6 (20%)
Proficient (4)		
<b>FIP</b> (30 papers, 120 reads)		
Insufficient (1-1.99)	2 (6%)	7 (23%)
Some (2-2.99)	18 (60%)	20 (67%)
Satisfactory (3-3.99)	10 (33%)	3 (10%)
Proficient (4)		
<b>Humanities Core</b> (30 papers, 120 reads)		
Insufficient (1-1.99)		8 (27%)
Some (2-2.99)	16 (53%)	15 (50%)
Satisfactory (3-3.99)	14 (47%)	7 (23%)
Proficient (4)		

Table 4D: Language and Style Conventions Category Score Distribution

Quality Scores by Trait	Language: Correctness	Language: Eloquence	Documentation
<b>39C Spring</b> (30 papers, 120 reads)			
Insufficient (1-1.99)	1 (3%)	2 (7%)	1 (3%)
Some (2-2.99)	14 (47%)	19 (63%)	15 (50%)
Satisfactory (3-3.99)	15 (50%)	9 (30%)	12 (40%)
Proficient (4)			2 (7%)
<b>FIP</b> (30 papers, 120 reads)			
Insufficient (1-1.99)	2 (7%)	1 (3%)	3 (10%)
Some (2-2.99)	9 (30%)	20 (67%)	15 (50%)
Satisfactory (3-3.99)	19 (63%)	9 (30%)	12 (40%)
Proficient (4)			
<b>Humanities Core</b> (30 papers, 120 reads)			
Insufficient (1-1.99)			1 (3%)
Some (2-2.99)	10 (33%)	13 (43%)	9 (30%)
Satisfactory (3-3.99)	18 (60%)	16 (53%)	17 (57%)
Proficient (4)	2 (7%)	1 (3%)	3 (10%)

Overall, these findings suggest that over 90% of students are able to demonstrate some or better evidence of achievement of the writing traits contained within the lower-division writing assessment rubric, with approximately 20% of students being able to demonstrate satisfactory evidence of achievement of the writing traits contained within the Lower-Division Writing Assessment Rubric. Based on the assessment results, all students, regardless of their lower-division writing trajectory, were strongest in the language and style conventions category. Students who fulfilled the lower-division writing requirement through Writing 39C 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 development, evidence, sources, and research category. Statistically significant differences were observed in 3 of the 12 writing traits contained in the lower-division writing assessment rubric. Because this is the third year where significant differences in quality scores as a function of lower-division writing trajectory have been observed in writing traits contained within the evidence/sources and language and style conventions categories, further study on this issue is needed to determine if the quality scores reflect differences in writing instruction, in the scope of the course’s writing assignments related to the selection, use, integration, and documentation of evidence, or the students who choose one lower-division writing trajectory over another. Most importantly, further investigation of this issue is likely to open the way for the various lower-division writing trajectories to learn how best to teach students in order that they might more effectively achieve these writing expectations and be able to demonstrate this achievement.

**Student Background and Writing**

In order to better understand the writing quality in the sample of lower-division writing papers assessed for this project, data was collected about students’ language background. Table 5 shows that over 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 5: Language Background by Lower Division Writing Course

Language Status	39C (n=30)	FIP (n=30)	Humanities Core (n=30)	ALL (n=90)
English Only	9 (30%)	11 (37%)	16 (53%)	36 (40%)
English & Another Language/Another Language Only	21 (70%)	19 (63%)	14 (47%)	54 (60%)

An analysis of variance, the results of which are displayed in Table 6, was performed to determine if there were significant differences in writing quality as a result 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  $p < .05$ . Significant differences emerged in writing quality associated with the language correctness trait as a function of students’ language background. In addition, as has been the case for the previous two years, the average scores for all twelve writing traits were consistently higher for English only students.

Table 6: Mean Writing Assessment Values as a Function of Language Status

	CATEGORY	English Only	English & Another/ Another Only
Rhetorical Knowledge	Focus	2.94	2.83
	Thesis	2.36	2.12
	Expertise on topic	2.86	2.68
	Rhetorical Awareness (genre/audience)	2.66	2.55
Sources/ Evidence	Critical Thinking: Development of Ideas	2.49	2.21
	Sources/Evidence: Credibility and/or Relevance	2.99	2.81
	Sources/Evidence: Integration	2.53	2.34
Structure & Organization	Paragraphs	2.86	2.71
	Structure, Order	2.38	2.19
Language & Style Conventions	Language: Correctness*	3.05	2.87
	Language: Eloquence	2.87	2.62
	Documentation	2.89	2.85
<b>TOTAL</b>		32.86	30.76

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

**Conclusions and Recommendations**

The 2011 Lower-Division Writing Assessment was designed with three goals in mind: (1) to assess the degree to which the Lower-Division Writing Assessment Rubric captured shared writing expectations across lower division writing courses, (2) to assess the quality of student writing produced through the different trajectories for fulfillment 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, modified in response to the findings and recommendations from previous Lower-Division Writing Assessment efforts, proved to be a useful tool for assessing the quality of research-based writing, the primary writing genre produced in completion of UCI's lower-division writing requirement. In reviewing the reliability coefficients, the rubric proved to be most reliable in capturing the writing quality of Writing 39C papers, and most reliable in capturing writing quality associated with the sources, evidence 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 that further refinement and definition of critical thinking would serve to further strengthen the rubric. 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 some to satisfactory evidence of achievement of the 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 all 12 writing traits contained within the lower-division writing assessment rubric. Significant differences emerged for 3 of the writing traits with Humanities Core papers demonstrating a higher level of achievement in the sources/evidence: integration, language: eloquence, and documentation writing traits. Overall, all papers produced in fulfillment of the lower-division writing requirement were strongest in the language and style conventions category and weakest in the development, evidence, sources, and research 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 higher assessment scores on all twelve writing traits contained within the Lower Division Writing Assessment Rubric, with significant differences observed in the language: correctness trait. In many respects, 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.

In light of these findings, the following recommendations emerge:

The Lower Division Writing Assessment Rubric proved to be a valuable tool for assessing research-based writing products. Refinements to the rubric that serve to further clarify what constitutes critical thinking (articulating different perspectives, critiquing perspectives, and/or engaging with different perspectives) will help to strengthen the rubric's overall effectiveness in capturing writing quality produced in fulfillment of the lower division writing requirement.

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, most notably those associated with the use, selection, integration, and documentation of evidence 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 lower writing quality scores, with significant differences emerging in the language: correctness trait. It is recommended that writing quality as a function of students' language background continue to be monitored in future writing assessment projects.