



UNIVERSITY OF MINNESOTA
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Office of Planning & Analysis

Office of Institutional Research

2014 SERU RESULTS FOR WRITING ENRICHED CURRICULUM PARTICIPANTS

April 30, 2015

Prepared by the Office of Institutional Research
University of Minnesota

The Writing Enriched Curriculum (WEC) Program at the University of Minnesota engages faculty in a process of describing, interrogating, teaching with discipline-specific writing values, practices, expectations, and implementable plans for change. WEC provides a method for supporting and assessing the infusion of relevant writing instruction into diverse curricula and the rate at which student writing meets faculty-generated criteria (from WEC Presentation, Assessment Retreat, June 14, 2013).

Starting in 2006, the WEC program has incrementally added academic units, starting with 2 departments in their first cohort (2007) to 55 departments and programs, including 78 majors and serving 16, 740 students as of January 15, 2015.

The schedule of programs added:

Cohort (Year of entry)	Unit
Cohort 1 (2007)	Mechanical Engineering
Cohort 1 (2007)	Political Science
Cohort 2 (2007)	Horticultural Science
Cohort 2 (2007)	Design, Housing, and Apparel
Cohort 2 (2007)	History
Cohort 3 (2008)	Nursing
Cohort 3 (2008)	College of Biological Science
Cohort 3 (2008)	Spanish and Portuguese Studies
Cohort 3 (2008)	Geography, Environment, and Society
Cohort 4 (2009)	Theatre Arts & Dance
Cohort 5 (2009)	African American and African Studies
Cohort 5 (2009)	Kinesiology
Cohort 6 (2010)	Philosophy
Cohort 6 (2010)	Family Social Science
Cohort 6 (2010)	Architecture
Cohort 6 (2010)	Construction Management
Cohort 6 (2010)	Physics
Cohort 7 (2011)	Computer Science and Engineering
Cohort 7 (2011)	Journalism and Mass Communications
Cohort 8 (2012)	Fisheries, Wildlife, and Conservation Biology
Cohort 8 (2012)	Earth Sciences
Cohort 8 (2012)	Carlson School of Management
Cohort 8 (2012)	Medical Laboratory Sciences
Cohort 9 (2013)	Art History
Cohort 9 (2013)	Sociology
Cohort 9 (2013)	Industrial and Systems Engineering
Cohort 9 (2013)	Agronomy
Cohort 10 (2014)	Applied Economics
Cohort 10 (2014)	Civil, Environmental, and Geo-Engineering
Cohort 10 (2014)	Food Science and Nutrition
Cohort 10 (2014)	Psychology

Cohort 10 (2014)	Youth Studies (School of Social Work)
Cohort 11 (2015)	Chemistry
Cohort 11 (2015)	Communication Studies
Cohort 11 (2015)	Environmental Sciences, Policy & Management
Cohort 11 (2015)	Mortuary Science
Cohort 11 (2015)	Organizational Leadership, Policy & Development

WEC has implemented and maintained several levels of assessment, including faculty designed writing rubrics, independently scored writing samples, and external program review. Additionally, the Student Experience in the Research University survey has been used as a campus-level data source to corroborate the findings of the program-specific assessments.

The Student Experience in the Research University (SERU) survey is a comprehensive survey administered to all undergraduates at the University of Minnesota-Twin Cities. The University of Minnesota – Twin Cities Campus administered the SERU in 2010, 2012, 2013 and 2014. The SERU includes items on student engagement, general satisfaction, campus climate, and academic experiences. There are items on the SERU Core module which have been identified to reflect outcomes from learning in a WEC unit. Additionally a subset of questions was specifically added to the campus-developed “wildcard” module to reflect changes expected in a program implanting WEC. In 2014, all undergraduates received the core module and 70% of undergraduates received the wildcard module. In this report a total of nineteen items were selected from the SERU for analysis.

Response rates and number of respondents are both robust for these data. SERU is a census survey of all undergraduate students at the University of Minnesota. In spring of 2014, the response rate was 30% of all students who were contacted to complete the survey (n=8332). Of all respondents, 2985 students (35.8%) were enrolled in WEC units.

WEC cohorts have a variety of administrative structures. Currently, cohorts are comprised of majors, departments, schools, and colleges. Thus, the major, department or college is referred to as a “unit.” Cohorts are grouped by the date the unit entered the WEC program. So, for example, Cohort 3 included the entire college of biological science and departments from other colleges, Cohort 5 included the School of Kinesiology (CEHD) a department with several majors, and the department of African American and African studies (CLA) which offers a single major. They both began their WEC planning in fall of 2009.

The first year a unit is engaged in WEC is set aside for planning. So implementation of a WEC Writing Plan does not start until the end of their first year. The analyses of WEC programs were completed using 2014 SERU responses and data from students in Cohorts 1-9. For analyses using data from 2010 and 2012 administrations of the SERU Cohorts 1-5 were used (2010 SERU) and Cohorts 1-7 were used (2012) SERU.

Faculty in WEC units spend the first year of their involvement developing a first-edition Writing Plan, so student experience in a WEC does not start until the year following the year the agreement is signed. This presents one interpretive caution for 2014 SERU data. Upper division students in the Cohort 9 academic programs will have not had as much experience in a WEC program as advanced students in units that have had a WEC program for a longer time. Many of the questions we use to evaluate the effectiveness of WEC ask specifically about experiences the student has had that academic year which may moderate some effects from length of students' experience, but not all questions do. We anticipate that WEC outcomes will be cumulative with experience.

WEC Outcome items from the SERU used in this report

SERU Prompt – 2014 version	Location	Label used on charts
CURRENT ABILITY LEVEL- <i>Analytical and critical thinking skills</i>	Core	Critical Thinking
CURRENT ABILITY LEVEL- <i>Ability to be clear and effective when writing</i>	Core	Effective Writing
Since starting at the University of Minnesota, how often have you engaged in the following behaviors or activities?- <i>Creatively identified and solved a problem in your personal life</i>	WC	Solved a personal problem
Since starting at the University of Minnesota, how often have you engaged in the following behaviors or activities?- <i>Creatively identified and solved a problem related to academic work</i>	WC	Solved an academic problem
Since starting at the University of Minnesota, how often have you engaged in the following behaviors or activities?- <i>Felt as though you have mastered major concepts related to your academic major (e.g. academic portfolio, extended research project, etc.)</i>	WC	Mastered major concepts
During this school year, across all of your courses, how frequently have you:- <i>Encountered writing assignments that have been relevant to your course content?</i>	WC-WEC	Relevant assignments
During this school year, across all of your courses, how frequently have you:- <i>Been offered useful writing instruction as you completed writing assignments?</i>	WC-WEC	Useful instruction
During this school year, across all of your courses, how frequently have you:- <i>Found that writing activities and assignments helped you to think critically and/or creatively about course content?</i>	WC-WEC	Critical writing
During this school year, across all of your courses, how frequently have you:- <i>Understood the criteria instructors used to grade your writing?</i>	WC-WEC	Understood criteria

During this school year, across all of your courses, how frequently have you:- <i>Felt confident in your ability to complete writing assignments successfully?</i>	WC-WEC	Confident writing
During this school year, across all of your courses, how frequently have you:- <i>Encountered consistent approaches to writing and writing instruction across courses taken in your major?</i>	WC-WEC	Consistent instruction
During this school year, for how many of your writing assignments has your instructor(s) done each of the following?***Used with permission from Charles Paine, Robert Gonyea, Paul Anderson, Chris Anson- <i>Provided clear instructions describing what he or she wanted you to do</i>	WC-WEC*	*Clear instructions
During this school year, for how many of your writing assignments has your instructor(s) done each of the following?***Used with permission from Charles Paine, Robert Gonyea, Paul Anderson, Chris Anson- <i>Explained in advance what he or she wanted you to learn</i>	WC-WEC*	*Explained learning goal
During this school year, for how many of your writing assignments has your instructor(s) done each of the following?***Used with permission from Charles Paine, Robert Gonyea, Paul Anderson, Chris Anson- <i>Explained in advance the criteria he or she would use to grade your</i>	WC-WEC*	*Explained grading
During this school year, for how many of your writing assignments has your instructor(s) done each of the following?***Used with permission from Charles Paine, Robert Gonyea, Paul Anderson, Chris Anson- <i>Provided a sample of a completed assignment written by the instructor or a student</i>	WC-WEC*	*Provided a sample
During this school year, for how many of your writing assignments has your instructor(s) done each of the following?***Used with permission from Charles Paine, Robert Gonyea, Paul Anderson, Chris Anson- <i>Asked you to</i>	WC-WEC*	*Ungraded writing
During this school year, for how many of your writing assignments has your instructor(s) done each of the following?***Used with permission from Charles Paine, Robert Gonyea, Paul Anderson, Chris Anson- <i>Asked you to give feedback to a classmate about a draft or outline the</i>	WC-WEC*	*Peer feedback
During this school year, for how many of your writing assignments has your instructor(s) done each of the following?***Used with permission from Charles Paine, Robert Gonyea, Paul Anderson, Chris Anson- <i>Asked you to</i>	WC-WEC*	*Group writing

During this school year, for how many of your writing assignments has your instructor(s) done each of the following? **Used with permission from Charles Paine, Robert Gonyea, Paul Anderson, Chris Anson-*Asked you to address a real or imagined audience such as your classmates, a politician, non-experts, etc.*

WC-WEC*

*Special audience

*These items are used with the permission of Charles Paine, Robert Gonyea, Paul Anderson, and Chris Anson, and they are part of the National Survey of Student Engagement (NSSE)

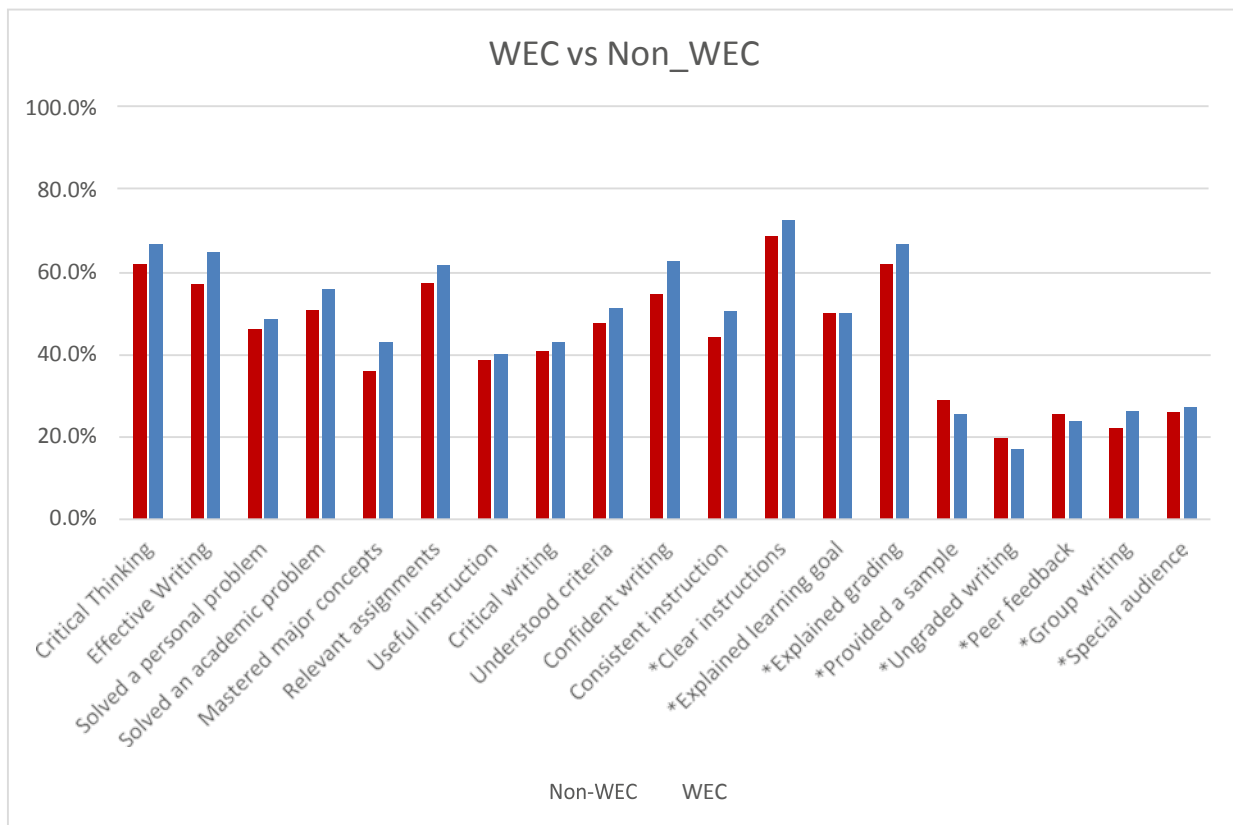
The core items and the non-NSSE wildcard items are all scored on a 6-point scale. The NSSE items from the wildcard module are scored on a 5-point scale. All the charts in this report “high agreement” or the percentage of students giving either of the top two ratings in the applicable scale.

The analyses of WEC Program outcome using 2014 SERU were conducted with data from students in Cohorts 1-9. For analyses using older data, Cohorts 1-5 were participating in WEC Programs during the 2010 SERU administration and Cohorts 1-7 were participating during the 2012 administration.

The following chart examines the pattern of responses to the 19 WEC outcome items. The WEC participants give consistently higher ratings than the non-WEC group. While the differences are not large, they are consistent for most of the items.

Note 1: Throughout these charts the color blue is used to indicate the scores from the WEC participants. Other colors are assigned to the comparison group(s).

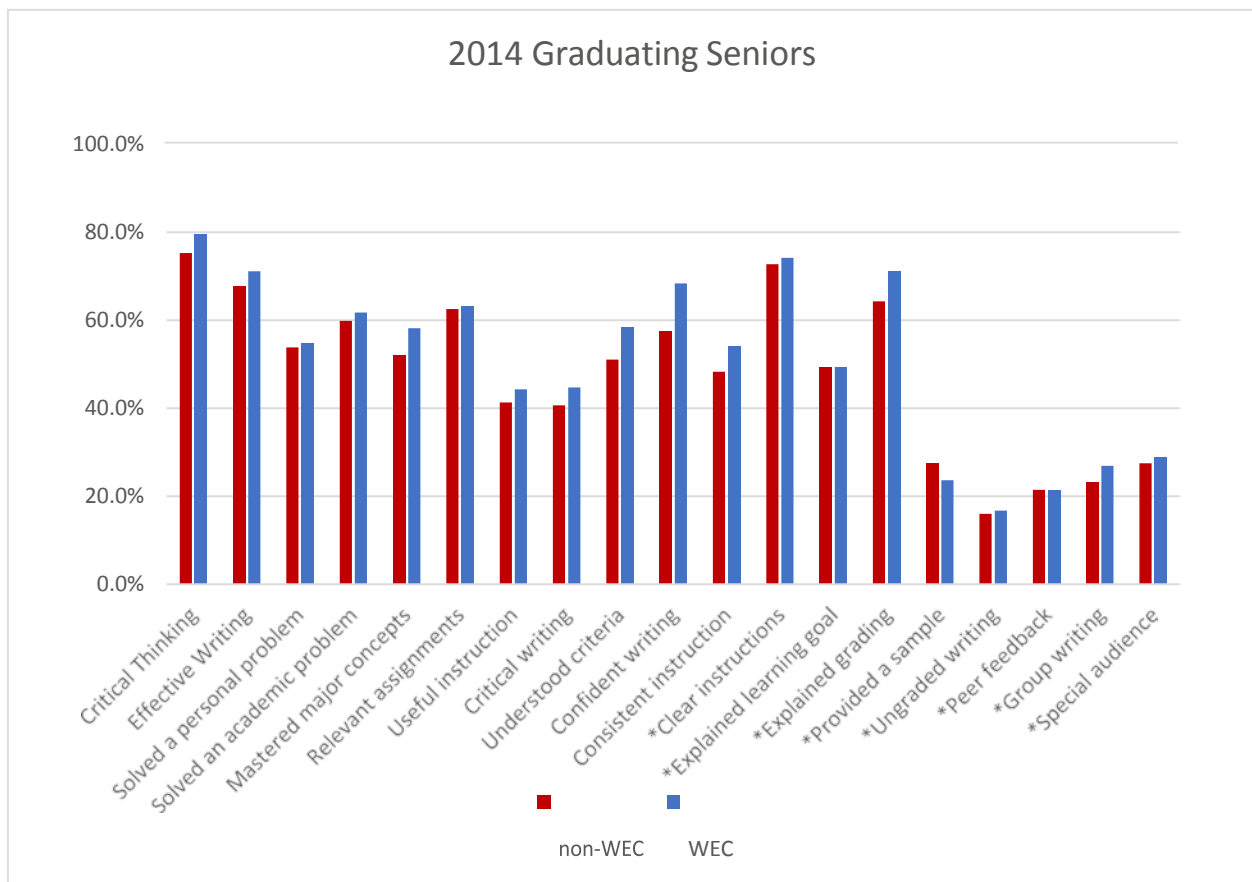
Note 2: Response counts for all charts are available in the appendix.



Cumulative effects

Learning complex skills is a gradual process requiring practice. To examine whether SERU measures are sensitive to student change, we can review cumulative effects of the WEC program. In our current data sets, students with more experience in a WEC curriculum rate their experiences differently from students not in a WEC unit. Extending this, further analyses compare the ratings provided by graduating seniors who were in WEC and those who were not, and comparing responses provided by upper-division students (juniors and seniors) who were and were not experiencing WEC-influenced curricula. Finally, the pattern of responses from upper and lower division students in the College of Biological Sciences and the Carlson School of Management were examined. These last two colleges are of interest because they are full-college WEC Program units.

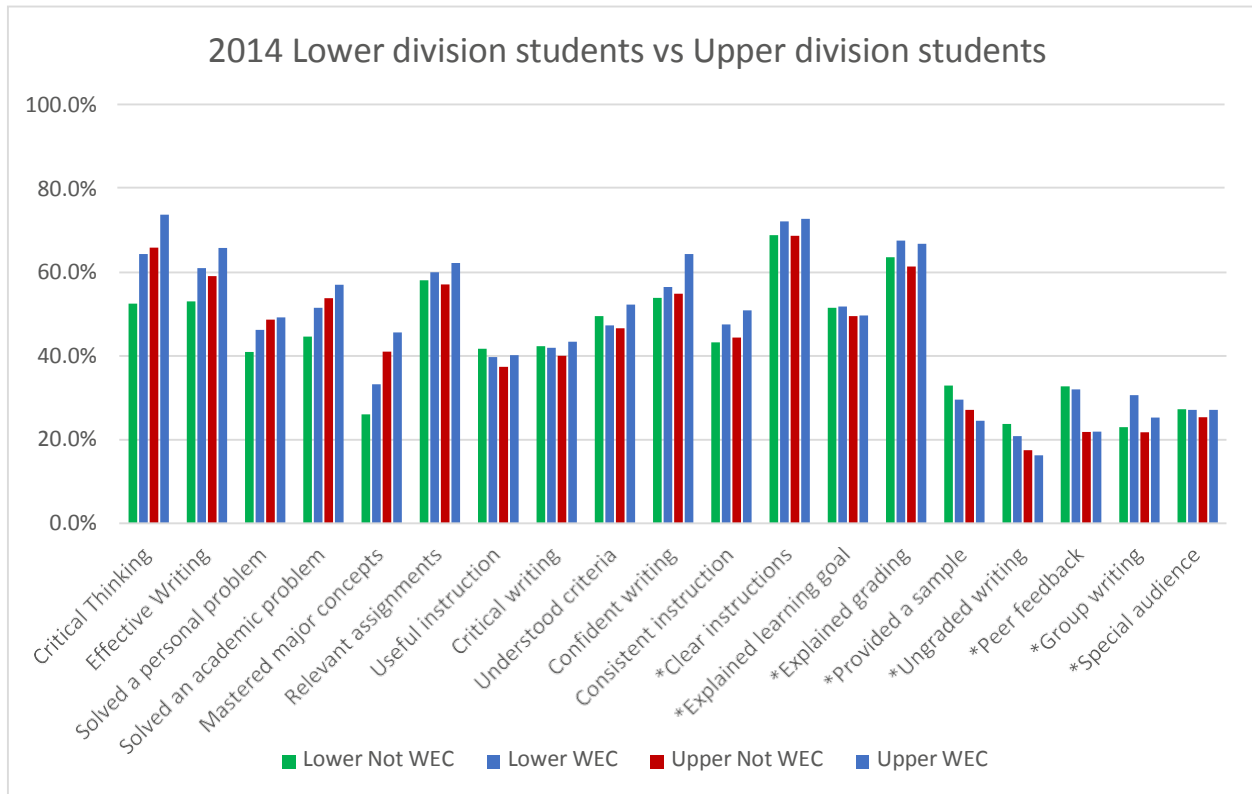
Here the pattern seen with graduating seniors is similar to the pattern we saw with all students. But the differences in ratings are smaller.



One reason for the smaller difference between graduating seniors in WEC and those who did not participate in WEC may be a result of the writing intensive work that many UMN undergraduates do when completing a senior capstone project. Even though many students across the university have this

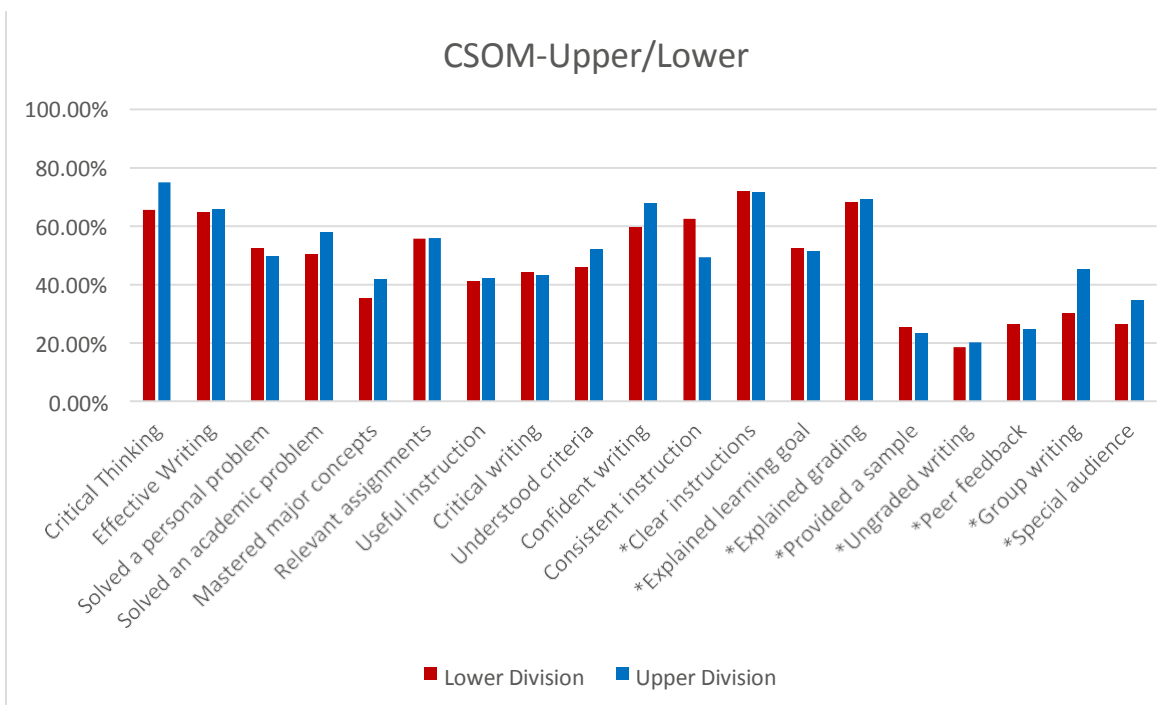
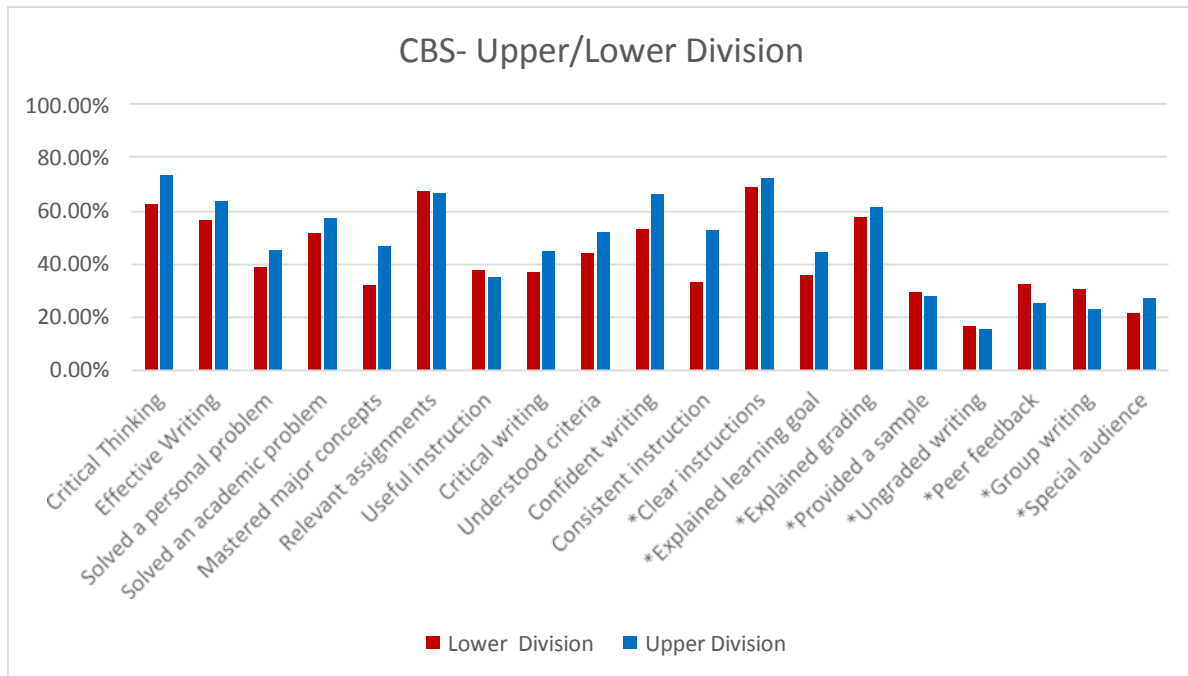
intensive writing experience there is still a consistent advantage for WEC participation on the outcome measures.

A cross-sectional examination of students in the early part of their academic curriculum and in the later part of their degree coursework should also reveal the impact of WEC. The next chart divides students by upper division (Junior/Senior) and lower division (Freshman/Sophomore) and compares their responses on the SERU items as a function of whether they are in a WEC program or not.



The WEC data include only students who have declared a major at the point they were surveyed. The lower division students vary greatly in how much major coursework they have taken. So it is predictable that, in many cases, the scores for WEC participants are higher for upper division students. The notable exceptions are in some of the items toward the right side of the chart where it appears that lower division students give higher ratings whether or not they are in a WEC program. Many of those items reflect specific teaching and learning experiences instead of outcomes. It may be that those teaching strategies are used less often as students move through the curriculum.

To look more specifically at the cumulative level of effects from WEC in a cross-sectional approach it is possible to compare the scores of lower division and upper division WEC program participants in the two colleges that are fully implementing WEC. These are the College of Biological Sciences (CBS) and the Carlson School of Management (CSOM).

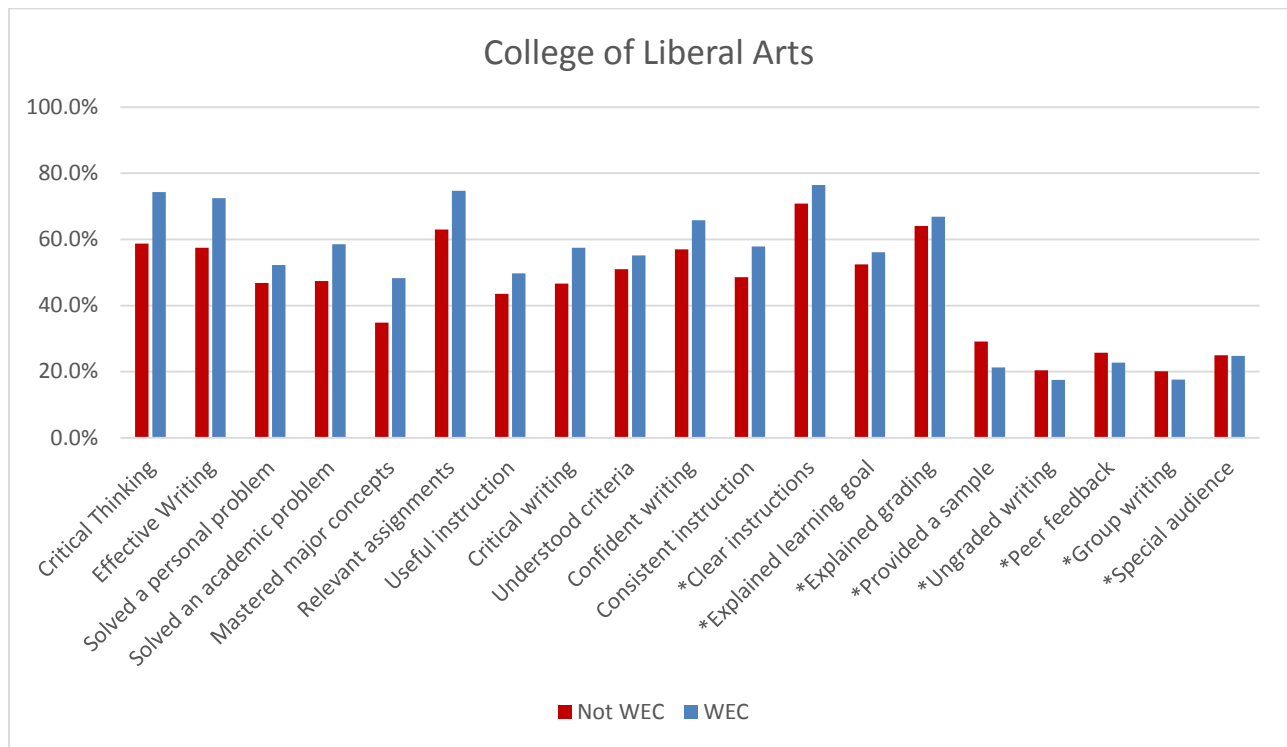


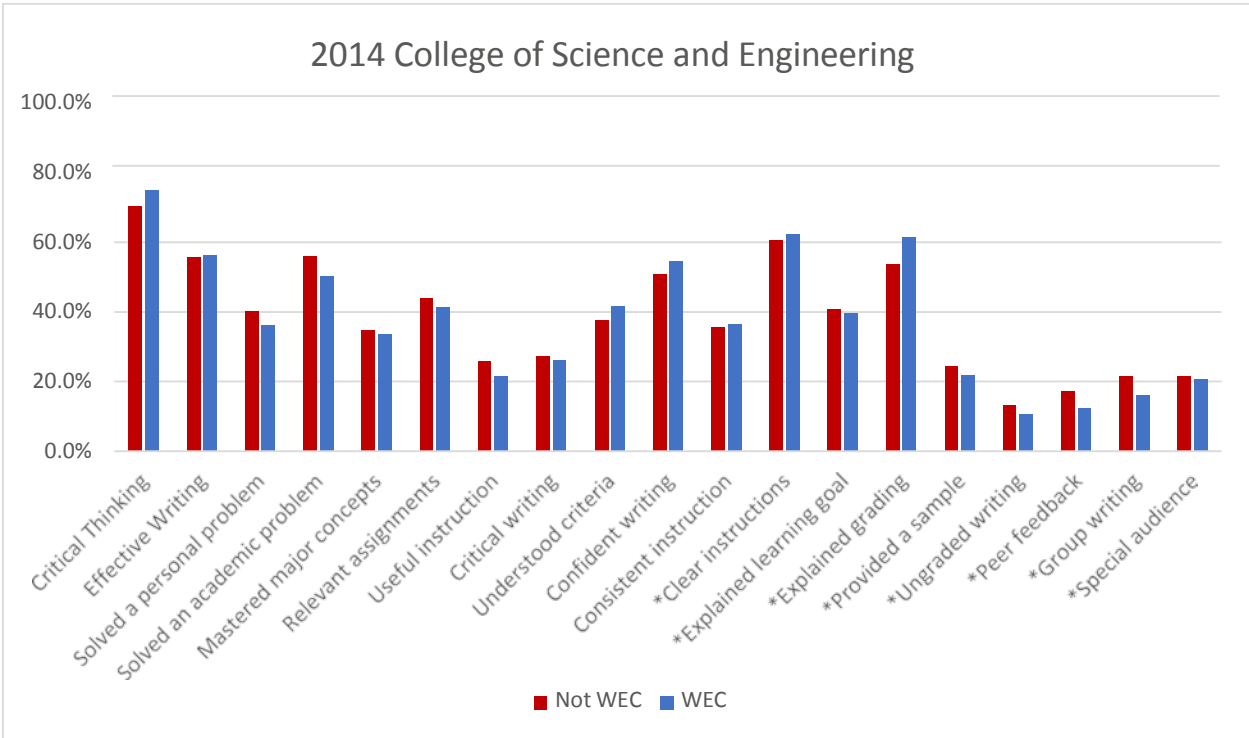
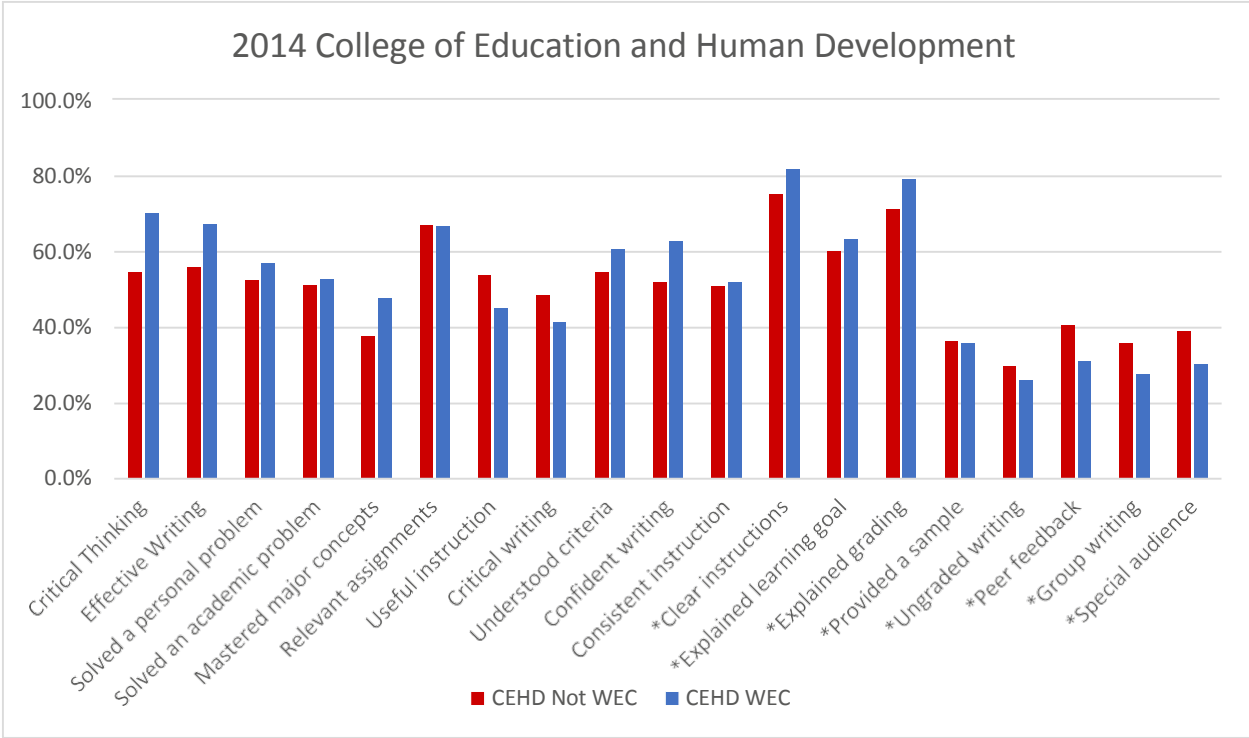
In both CBS and CSOM, upper division students gave higher ratings for their own academic experiences and gave stronger evaluations for their writing instruction than did the lower-division students. This difference is not as consistent in Carlson. The use of specific writing assignment types (e.g., provided a sample, ungraded writing) was experienced differently in the two colleges.

Initial differences

Drawing conclusions from these data is possibly confounded by initial differences in students who enroll in WEC units and those who enroll in non-WEC units. In this regard, it is notable that the WEC lower division students, who have presumably had less major coursework, still rate their experiences higher than the non-WEC students. One explanation for this is may be that they have sufficient major coursework to show some effect from the WEC. A counter-explanation is that the WEC students are otherwise inclined to rate their experiences differently than non-WEC students .

Examining certain comparisons may increase confidence that differences between these groups are due to WEC instead of initial differences in the students. While it is not definitive, one simple comparison is to look at the difference in responses between students in a college who participate in a WEC with students in that same college who do not participate in WEC. This has the advantage of assuring that we are comparing students who all met similar admission requirements, but reduces some effects of self-selection in major selection.





The differences between the non-WEC and WEC participants show an advantage for WEC in the College of Liberal Arts and in the College of Education and Human Development. Those results are mixed in the College of Science and Engineering.

Stability over time

One finding that lends confidence to conclusions about program efficacy is the stability of WEC participant scores over time. Programmatic effects should persist and be evident over continuing years. Because programs enter at different times it is also possible to look at “before” and “after” scores for cohorts who implemented the WEC program within the range of years that SERU data is available.

The next charts compare performance of different cohorts across multiple administrations of the SERU. These results are cross-sectional, not longitudinal so there are some threats to conclusions we draw since the students who responded in 2014 might have started with a different skill set than the students who responded in 2012. But patterns that recur across cohorts provide greater confidence that any changes are due to the implementation of WEC.

Not all of the items we analyzed for the 2014 SERU administration are available in earlier years. This table lists each variable and in what years the variable was included in the survey. The following multi-year charts omit the three 2014-only items. The ‘wildcard’ module was administered to a randomly selected 30% of students in 2010 and 2012. In 2014 the module was administered to 70% of undergraduates. These differences are evident in the response counts presented in the appendix.

Survey Item	Years administered
Critical Thinking	2014,2012, 2010
Effective Writing	2014,2012, 2010
Solved a personal problem	2014
Solved an academic problem	2014
Mastered major concepts	2014
Relevant assignments	2014,2012, 2010
Useful instruction	2014,2012, 2010
Critical writing	2014,2012, 2010
Understood criteria	2014,2012, 2010
Confident writing	2014,2012, 2010
Consistent instruction	2014,2012,
*Clear instructions	2014,2012, 2010
*Explained learning goal	2014,2012, 2010
*Explained grading	2014,2012, 2010
*Provided a sample	2014,2012, 2010
*Ungraded writing	2014,2012, 2010
*Peer feedback	2014,2012, 2010
*Group writing	2014,2012, 2010
*Special audience	2014,2012, 2010

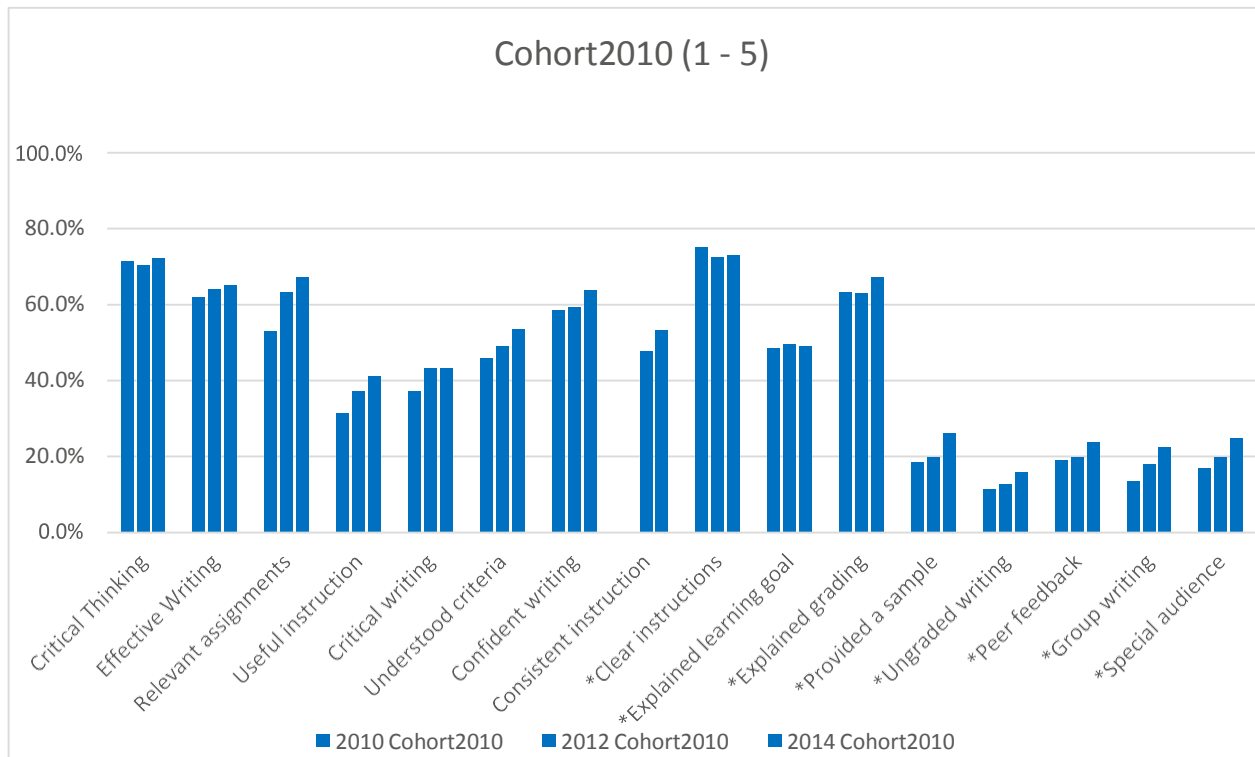
*NSSE survey item used by permission

To complete this analysis data from specific cohorts were aggregated and reported for three SERU administrations. This permits us to chart responses from the same sets of units over time, and in the case of cohorts 6-9 to compare their ratings before and after the unit began implementing WEC. These

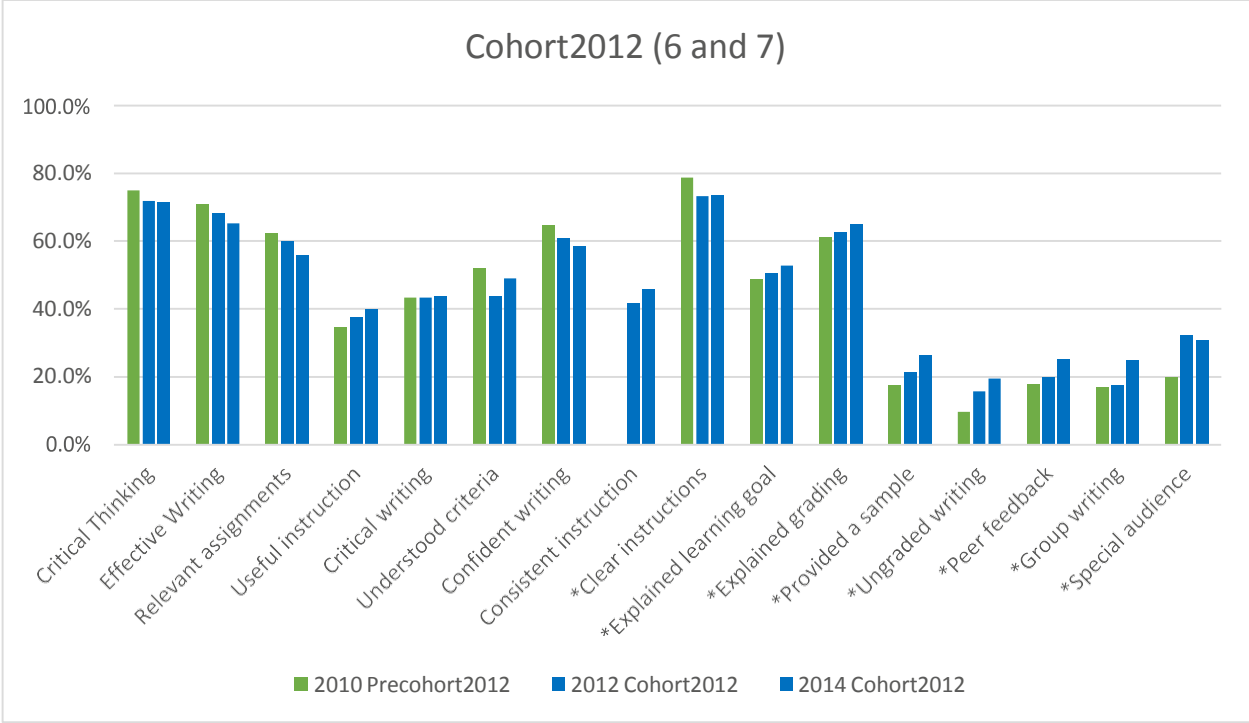
newly grouped cohorts are based on when the unit began implementing WEC relative to SERU administrations. Because the SERU was not administered in 2011, I used SERU results with two-year intervals, 2010, 2012, and 2014.

Cohorts 1-5 (Cohort2010) were all active WEC units during the SERU 2010 administration. Cohorts 6 -9 were not WEC units during the 2010 SERU administration, but they were implementing WEC by the 2012 administration (Cohort2012). Cohorts 8 and 9 were implementing WEC by the 2014 SERU administration (Cohort2014).

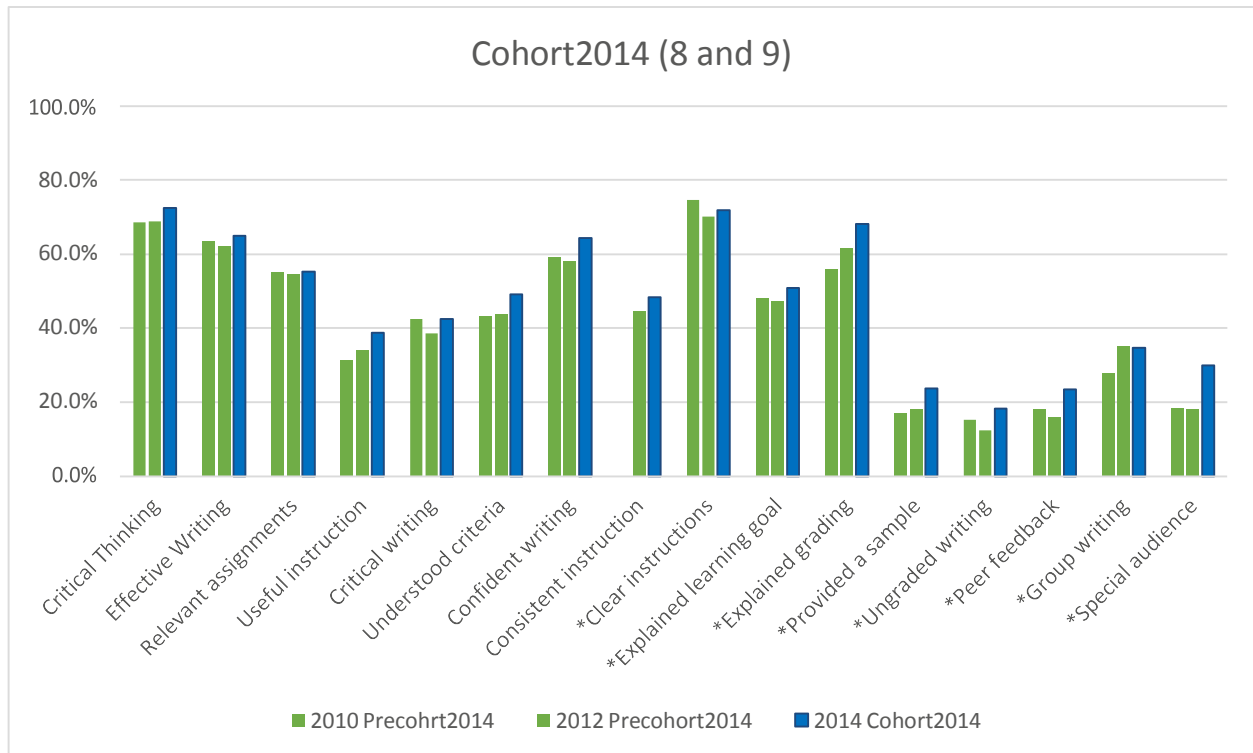
The blue color indicates WEC implementation, green bars are data from those same units before they were implementing WEC.



The outcome ratings from Cohort2010 show general improvement for most items across years of ratings. This pattern is consistent with an instructional intervention that is being implemented and refined through feedback and experience.



The outcome ratings from Cohort2012 are dissimilar to most of the data presented on WEC and non-WEC differences. It is not typical in the other findings for ratings to be higher from a Cohort who is non-WEC (in this case, pre-WEC). Cohort2012 includes the units Philosophy, Family Social Science, Architecture, Construction Management, Physics, Computer Science and Engineering, and Journalism and Mass Communications. More examination of the WEC experiences in these units is warranted.



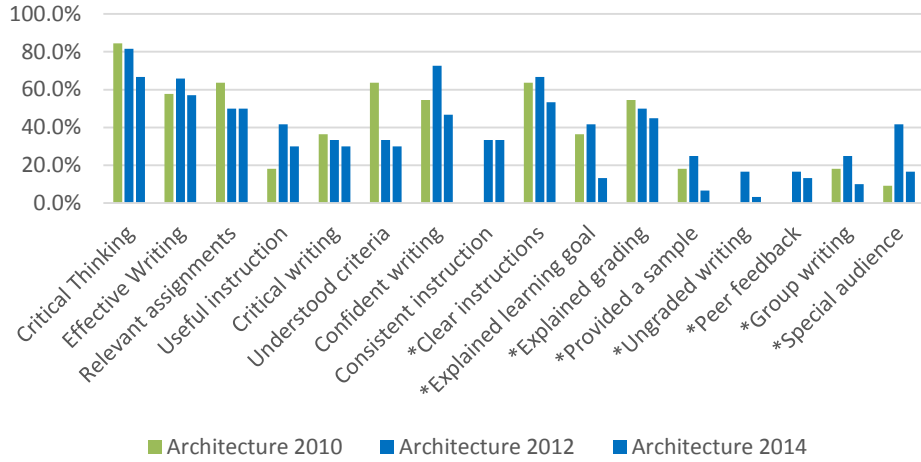
The Cohort2014 ratings show a pattern of higher ratings after the WEC program is implemented on many items.

Examining Cohort2012 (6 and 7)

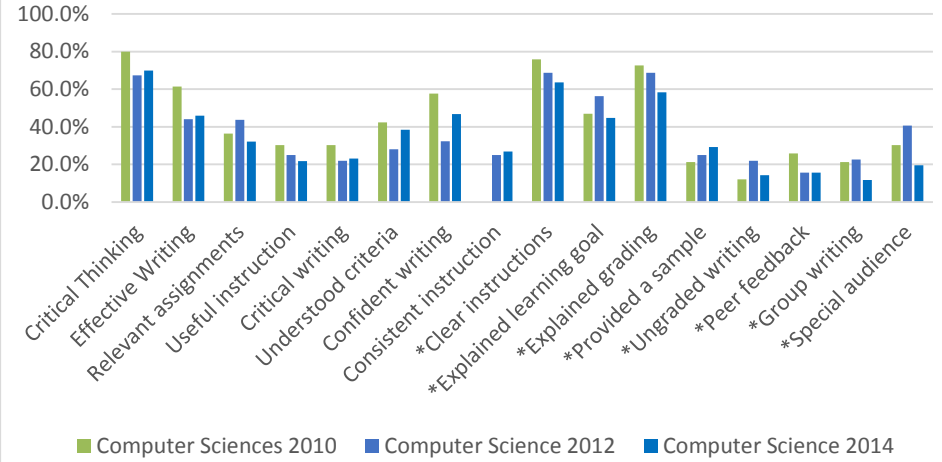
The pattern for cohorts 6 and 7 is inconsistent with the patterns of outcomes we see in the other comparisons of WEC and non-WEC cohorts. To determine the source, though not the cause, of these unusual patterns, responses from each major within WEC were examined for their possible influence on the overall ratings for the cohort.

Cohorts 6 and 7 are comprised of students in Architecture, Computer Engineering, Computer Science, Construction Management, Family Social Science, Journalism, Philosophy, and Physics. Response counts for some of these majors were too small to report. The charts display data from Architecture, Computer Science, Family Social Science, and Journalism.

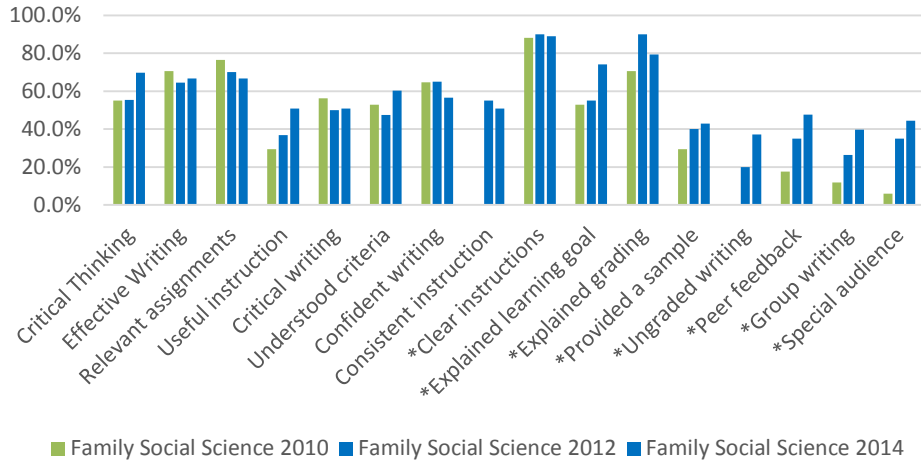
Architecture



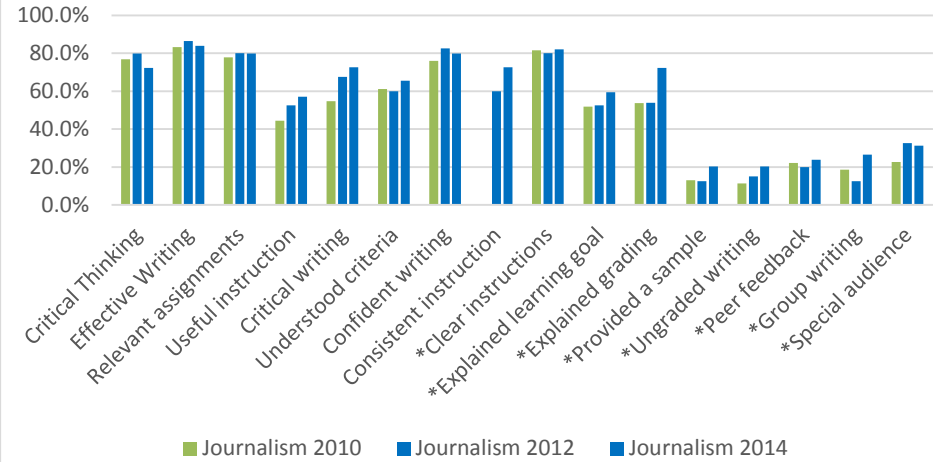
Computer Science



Family Social Science



Journalism



Students responding from two majors, Architecture and Computer Science gave consistently lower scores on the outcome measures after WEC was instituted. The lower ratings from students in these two programs accounts for the weaker aggregate ratings for Cohorts 6 and 7 combined. Additionally the pattern of responses was mixed across the items for Family Social Science. The pre-WEC ratings were very strong for Journalism, so it is unsurprising that there were fewer differences after the WEC Program started. Where differences are evident are in times that had lower ratings from the participants. It may be beneficial for the WEC Program consultants to confer with the faculty in these programs to better understand what affected these students' ratings of their experiences.

Conclusion

Across many comparisons the outcome ratings from WEC students are higher than the ratings from students not in a WEC unit. While the differences are not large, the consistency of findings supports a conclusion that units enrolled in the WEC Program offer advantages to student learning when compared to units not enrolled in the WEC Program.

Appendix: Count of respondents for report figures

Non-WEC vs WEC

Survey item	Not WEC	WEC	Not WEC	WEC
	Count	Count	% High	% High
Critical Thinking	4946	2757	62.2%	67.0%
Effective Writing	4948	2763	57.2%	65.1%
Solved a personal problem	3226	1805	46.2%	48.8%
Solved an academic problem	3219	1803	50.9%	56.0%
Mastered major concepts	3220	1802	36.1%	43.3%
Relevant assignments	3176	1771	57.6%	61.9%
Useful instruction	3178	1772	38.9%	40.2%
Critical writing	3167	1772	40.9%	43.2%
Understood criteria	3171	1771	47.7%	51.4%
Confident writing	3168	1766	54.7%	63.0%
Consistent instruction	2140	1518	44.4%	50.6%
*Clear instructions	3178	1773	68.9%	72.8%

*Explained learning goal	3172	1772	50.3%	50.2%
*Explained grading	3165	1765	62.2%	67.0%
*Provided a sample	3172	1769	29.1%	25.6%
*Ungraded writing	3171	1766	19.6%	17.2%
*Peer feedback	3168	1769	25.5%	24.0%
*Group writing	3172	1769	22.2%	26.3%
*Special audience	3168	1764	26.0%	27.2%

Graduating Seniors

Survey items	Not WEC	WEC	Non-WEC	WEC
	Count	Count	% High	% High
Critical Thinking	826	647	62.2%	67.0%
Effective Writing	825	648	57.2%	65.1%
Solved a personal problem	550	418	46.2%	48.8%
Solved an academic problem	550	418	50.9%	56.0%
Mastered major concepts	549	417	36.1%	43.3%
Relevant assignments	540	408	57.6%	61.9%
Useful instruction	540	411	38.9%	40.2%
Critical writing	539	411	40.9%	43.2%
Understood criteria	539	410	47.7%	51.4%
Confident writing	537	409	54.7%	63.0%
Consistent instruction	534	409	44.4%	50.6%
*Clear instructions	540	411	68.9%	72.8%
*Explained learning goal	539	409	50.3%	50.2%
*Explained grading	538	408	62.2%	67.0%
*Provided a sample	538	409	29.1%	25.6%
*Ungraded writing	540	410	19.6%	17.2%
*Peer feedback	538	408	25.5%	24.0%
*Group writing	539	409	22.2%	26.3%
*Special audience	539	408	26.0%	27.2%

Lower Division/Upper Division – WEC or Not WEC

	Lower Division		Upper Division		Lower		Upper division	
	Not WEC	WEC	Not WEC	WEC	Not WEC	WEC	Not WEC	WEC
	Count	Count	Count	Count	% High	% Hig	% High	% High
Critical Thinking	1665	493	3281	2264	52.6%	64.5%	66.0%	73.9%
Effective Writing	1667	493	3281	2270	53.1%	61.1%	59.2%	65.9%
Solved a personal problem	1070	352	2156	1453	41.0%	46.3%	48.8%	49.3%
Solved an academic problem	1066	351	2153	1452	44.7%	51.6%	53.9%	57.1%

Mastered major concepts	1066	351	2154	1451	26.1%	33.3%	41.1%	45.7%
Relevant assignments	1048	348	2128	1423	58.2%	60.1%	57.2%	62.3%
Useful instruction	1047	347	2131	1425	41.8%	39.8%	37.4%	40.3%
Critical writing	1046	348	2121	1424	42.4%	42.0%	40.1%	43.5%
Understood criteria	1047	348	2124	1423	49.6%	47.4%	46.7%	52.4%
Confident writing	1047	346	2121	1420	54.0%	56.6%	55.0%	64.5%
Consistent instruction	245	164	1895	1354	43.3%	47.6%	44.5%	51.0%
*Clear instructions	1049	347	2129	1426	69.0%	72.3%	68.8%	72.9%
*Explained learning goal	1046	347	2126	1425	51.6%	51.9%	49.6%	49.8%
*Explained grading	1042	344	2123	1421	63.7%	67.7%	61.5%	66.9%
*Provided a sample	1047	345	2125	1424	33.0%	29.6%	27.2%	24.6%
*Ungraded writing	1046	344	2125	1422	23.8%	20.9%	17.5%	16.3%
*Peer feedback	1046	346	2122	1423	32.8%	32.1%	21.9%	22.0%
*Group writing	1049	345	2123	1424	23.0%	30.7%	21.8%	25.3%
*Special audience	1046	345	2122	1419	27.3%	27.2%	25.4%	27.2%

College of Biological Sciences, Lower Division/Upper Division

Survey Item	Lower Division	Upper Division	Lower Division	Upper Division
	Count	Count	% High	% High
Critical Thinking	149	434	63.1%	74.0%
Effective Writing	148	435	56.8%	63.9%
Solved a personal problem	110	278	39.1%	45.3%
Solved an academic problem	110	279	51.8%	57.7%
Mastered major concepts	109	278	32.1%	47.1%
Relevant assignments	108	270	67.6%	67.0%
Useful instruction	108	270	38.0%	35.2%
Critical writing	108	270	37.0%	45.2%
Understood criteria	108	270	44.4%	52.2%
Confident writing	107	268	53.3%	66.8%
Consistent instruction	33	245	33.3%	53.1%
*Clear instructions	108	271	69.4%	72.7%
*Explained learning goal	108	271	36.1%	45.0%
*Explained grading	107	270	57.9%	61.9%
*Provided a sample	107	271	29.9%	28.0%
*Ungraded writing	107	270	16.8%	15.6%
*Peer feedback	107	270	32.7%	25.2%
*Group writing	107	271	30.8%	23.2%
*Special audience	107	270	21.5%	27.4%

Carlson School of Management, Lower Division/Upper Division

	Lower Division	Upper Divisio	Lower Division	Upper Division
Critical Thinking	157	396	65.6%	75.0%
Effective Writing	156	397	64.7%	66.0%
Solved a personal problem	116	255	52.6%	49.8%
Solved an academic problem	115	255	50.4%	58.0%
Mastered major concepts	116	256	35.3%	41.8%
Relevant assignments	115	248	55.7%	56.0%
Useful instruction	114	250	41.2%	42.0%
Critical writing	115	251	44.3%	43.4%
Understood criteria	115	249	46.1%	52.2%
Confident writing	114	250	59.6%	68.0%
Consistent instruction	8	207	62.5%	49.3%
*Clear instructions	114	248	71.9%	71.8%
*Explained learning goal	114	249	52.6%	51.4%
*Explained grading	113	248	68.1%	69.4%
*Provided a sample	114	248	25.4%	23.4%
*Ungraded writing	113	248	18.6%	20.2%
*Peer feedback	114	248	26.3%	24.6%
*Group writing	113	247	30.1%	45.3%
*Special audience	114	247	26.3%	34.4%

College of Liberal Arts – WEC or Not-WEC

Survey Item	Not WEC	WEC	Not WEC	WEC
	Count	Count	% High	%High
Critical Thinking	2425	549	58.7%	74.3%
Effective Writing	2425	553	57.5%	72.5%
Solved a personal problem	1566	355	46.8%	52.3%
Solved an academic problem	1563	355	47.4%	58.6%
Mastered major concepts	1562	354	34.8%	48.3%
Relevant assignments	1536	348	63.0%	74.7%
Useful instruction	1537	348	43.5%	49.7%
Critical writing	1532	346	46.6%	57.5%
Understood criteria	1535	348	51.0%	55.2%
Confident writing	1533	348	57.0%	65.8%
Consistent instruction	953	344	48.6%	57.9%
*Clear instructions	1541	349	70.8%	76.5%

*Explained learning goal	1535	349	52.5%	56.1%
*Explained grading	1535	347	64.1%	66.9%
*Provided a sample	1539	347	29.1%	21.3%
*Ungraded writing	1536	348	20.4%	17.5%
*Peer feedback	1536	348	25.7%	22.7%
*Group writing	1539	348	20.1%	17.6%
*Special audience	1539	347	25.0%	24.8%

College of Education and Human Development – WEC or Not-WEC

Survey Items	Not WEC	WEC	Not WEC	WEC
	Count	Count	% High	% High
Critical Thinking	411	293	54.5%	70.3%
Effective Writing	409	293	56.0%	67.2%
Solved a personal problem	271	188	52.4%	56.9%
Solved an academic problem	270	187	51.1%	52.9%
Mastered major concepts	271	188	37.6%	47.9%
Relevant assignments	267	184	67.1%	66.8%
Useful instruction	267	184	53.9%	45.1%
Critical writing	267	184	48.7%	41.3%
Understood criteria	267	183	54.7%	60.7%
Confident writing	265	183	52.0%	62.8%
Consistent instruction	120	184	50.9%	52.2%
*Clear instructions	266	184	75.2%	82.0%
*Explained learning goal	266	183	60.1%	63.4%
*Explained grading	265	183	71.3%	79.2%
*Provided a sample	266	184	36.5%	35.8%
*Ungraded writing	266	183	29.7%	26.2%
*Peer feedback	266	183	40.6%	31.2%
*Group writing	266	184	35.7%	27.7%
*Special audience	266	182	39.1%	30.2%

College of Science and Engineering, WEC or Not-WEC

Survey Item	Not WEC	WEC	Not WEC	WEC
	Count	Count	% High	% High
Critical Thinking	1133	381	70.3%	74.8%
Effective Writing	1135	383	55.7%	56.2%
Solved a personal problem	753	243	40.1%	36.2%
Solved an academic problem	751	243	55.9%	50.2%

Mastered major concepts	754	242	34.8%	33.5%
Relevant assignments	746	245	43.9%	41.2%
Useful instruction	747	245	25.7%	21.6%
Critical writing	743	245	27.2%	26.1%
Understood criteria	744	245	37.5%	41.6%
Confident writing	745	244	50.8%	54.6%
Consistent instruction	543	244	35.6%	36.5%
*Clear instructions	745	244	60.4%	62.3%
*Explained learning goal	745	243	40.7%	39.5%
*Explained grading	741	244	53.6%	61.4%
*Provided a sample	743	243	24.3%	21.8%
*Ungraded writing	744	242	13.3%	10.7%
*Peer feedback	742	244	17.1%	12.3%
*Group writing	743	244	21.6%	16.0%
*Special audience	741	244	21.6%	20.5%

Stability over time

2010 Cohort (1-5)	2010	2012	2014	2010	2012	2014
Survey Item	Count	Count	Count	% High	% High	% High
Critical Thinking	1720	1749	1501	71.3%	70.3%	72.3%
Effective Writing	1716	1749	1503	61.8%	64.0%	65.1%
Relevant assignments	525	501	971	53.0%	63.3%	67.1%
Useful instruction	522	499	971	31.4%	37.3%	41.1%
Critical writing	523	500	969	37.3%	43.2%	43.3%
Understood criteria	521	499	970	45.9%	49.1%	53.4%
Confident writing	520	499	967	58.5%	59.3%	63.7%
Consistent instruction	n/a	498	867	n/a	47.8%	53.2%
*Clear instructions	523	500	974	75.1%	72.4%	73.0%
*Explained learning goal	523	500	974	48.6%	49.6%	49.0%
*Explained grading	521	500	969	63.3%	63.0%	67.1%
*Provided a sample	521	499	972	18.4%	19.8%	26.3%
*Ungraded writing	523	497	970	11.3%	12.9%	16.0%
*Peer feedback	522	498	970	19.2%	19.9%	23.8%
*Group writing	521	500	973	13.4%	18.0%	22.6%
*Special audience	519	498	969	17.0%	19.7%	24.8%

2012 Cohort (6 and 7)	2010	2012	2014	2010	2012	2014
Survey Item	Count	Count	Count	% High	% High	% High
Critical Thinking	535	478	484	75.0%	71.8%	71.3%
Effective Writing	535	479	487	71.0%	68.1%	65.3%
Relevant assignments	136	127	310	62.5%	59.8%	55.8%
Useful instruction	136	126	310	34.6%	37.3%	39.7%
Critical writing	134	127	310	43.3%	43.3%	43.9%
Understood criteria	136	126	310	52.2%	43.7%	49.0%
Confident writing	136	125	308	64.7%	60.8%	58.4%
Consistent instruction	n/a	127	310	n/a	41.7%	45.8%
*Clear instructions	136	127	309	78.7%	73.2%	73.5%
*Explained learning goal	135	127	307	48.9%	50.4%	52.8%
*Explained grading	136	126	307	61.0%	62.7%	65.1%
*Provided a sample	136	127	307	17.6%	21.3%	26.4%
*Ungraded writing	134	127	307	9.7%	15.7%	19.5%
*Peer feedback	134	127	309	17.9%	19.7%	25.2%
*Group writing	136	125	308	16.9%	17.6%	25.0%
*Special audience	135	127	306	20.0%	32.3%	30.7%

2014 Cohort (8 and 9)	2010	2012	2014	2010	2012	2014
Survey Item	Count	Count	Count	% High	% High	% High
Critical Thinking	823	710	772	68.5%	68.9%	72.5%
Effective Writing	821	710	773	63.7%	62.1%	64.9%
Relevant assignments	235	188	490	55.3%	54.8%	55.3%
Useful instruction	236	188	491	31.4%	34.0%	38.7%
Critical writing	236	187	493	42.4%	38.5%	42.4%
Understood criteria	236	187	491	43.2%	43.9%	49.1%
Confident writing	233	188	491	59.2%	58.0%	64.4%
Consistent instruction	n/a	188	341	n/a	44.7%	48.4%
*Clear instructions	236	187	490	74.6%	70.1%	71.8%
*Explained learning goal	235	186	491	48.1%	47.3%	50.9%
*Explained grading	234	183	489	56.0%	61.7%	68.1%
*Provided a sample	234	187	490	17.1%	18.2%	23.7%
*Ungraded writing	235	187	489	15.3%	12.3%	18.2%
*Peer feedback	231	187	490	18.2%	16.0%	23.5%
*Group writing	234	185	488	27.8%	35.1%	34.6%
*Special audience	234	186	489	18.4%	18.3%	29.9%

Within Cohorts 6 and 7, Majors ratings by year

Architecture

	2010	2012	2014	2010	2012	2014
Survey Item	Count	Count	Count	% High	% High	% High
Critical Thinking	45	38	42	84.4%	81.6%	66.7%
Effective Writing	45	38	42	57.8%	65.8%	57.1%
Relevant assignments	11	12	30	63.6%	50.0%	50.0%
Useful instruction	11	12	30	18.2%	41.7%	30.0%
Critical writing	11	12	30	36.4%	33.3%	30.0%
Understood criteria	11	12	30	63.6%	33.3%	30.0%
Confident writing	11	11	30	54.5%	72.7%	46.7%
Consistent instruction	n/a	12	30	n/a	33.3%	33.3%
*Clear instructions	11	12	30	63.6%	66.7%	53.3%
*Explained learning goal	11	12	30	36.4%	41.7%	13.3%
*Explained grading	11	12	29	54.5%	50.0%	44.8%
*Provided a sample	11	12	30	18.2%	25.0%	6.7%
*Ungraded writing	11	12	30	0.0%	16.7%	3.3%
*Peer feedback	11	12	30	0.0%	16.7%	13.3%
*Group writing	11	12	30	18.2%	25.0%	10.0%
*Special audience	11	12	30	9.1%	41.7%	16.7%

Computer Science

	2010	2012	2014	2010	2012	2014
Survey Item	Count	Count	Count	% High	% High	% High
Critical Thinking	85	101	113	80.0%	67.3%	69.9%
Effective Writing	83	100	113	61.4%	44.0%	46.0%
Relevant assignments	33	32	78	36.4%	43.8%	32.1%
Useful instruction	33	32	78	30.3%	25.0%	21.8%
Critical writing	33	32	78	30.3%	21.9%	23.1%
Understood criteria	33	32	78	42.4%	28.1%	38.5%
Confident writing	33	31	77	57.6%	32.3%	46.8%
Consistent instruction	n/a	32	78	n/a	25.0%	26.9%
*Clear instructions	33	32	77	75.8%	68.8%	63.6%
*Explained learning goal	32	32	76	46.9%	56.3%	44.7%
*Explained grading	33	32	77	72.7%	68.8%	58.4%
*Provided a sample	33	32	75	21.2%	25.0%	29.3%
*Ungraded writing	33	32	77	12.1%	21.9%	14.3%
*Peer feedback	31	32	77	25.8%	15.6%	15.6%
*Group writing	33	31	77	21.2%	22.6%	11.7%
*Special audience	33	32	77	30.3%	40.6%	19.5%

Family Social Science

	2010	2012	2014	2010	2012	2014
Survey Item	Count	Count	Count	% High	% High	% High
Critical Thinking	69	76	96	55.1%	55.3%	69.8%
Effective Writing	68	76	96	70.6%	64.5%	66.7%
Relevant assignments	17	20	63	76.5%	70.0%	66.7%
Useful instruction	17	19	63	29.4%	36.8%	50.8%
Critical writing	16	20	63	56.3%	50.0%	50.8%
Understood criteria	17	19	63	52.9%	47.4%	60.3%
Confident writing	17	20	62	64.7%	65.0%	56.5%
Consistent instruction	n/a	20	63	n/a	55.0%	50.8%
*Clear instructions	17	20	63	88.2%	90.0%	88.9%
*Explained learning goal	17	20	62	52.9%	55.0%	74.2%
*Explained grading	17	20	63	70.6%	90.0%	79.4%
*Provided a sample	17	20	63	29.4%	40.0%	42.9%
*Ungraded writing	16	20	62	0.0%	20.0%	37.1%
*Peer feedback	17	20	63	17.6%	35.0%	47.6%
*Group writing	17	19	63	11.8%	26.3%	39.7%
*Special audience	17	20	63	5.9%	35.0%	44.4%

Journalism

	2010	2012	2014	2010	2012	2014
Survey Item	Count	Count	Count	% High	% High	% High
Critical Thinking	242	169	141	76.9%	79.9%	72.3%
Effective Writing	246	170	143	83.3%	86.5%	83.9%
Relevant assignments	54	40	84	77.8%	80.0%	79.8%
Useful instruction	54	40	84	44.4%	52.5%	57.1%
Critical writing	53	40	84	54.7%	67.5%	72.6%
Understood criteria	54	40	84	61.1%	60.0%	65.5%
Confident writing	54	40	84	75.9%	82.5%	79.8%
Consistent instruction	n/a	40	84	n/a	60.0%	72.6%
*Clear instructions	54	40	84	81.5%	80.0%	82.1%
*Explained learning goal	54	40	84	51.9%	52.5%	59.5%
*Explained grading	54	39	83	53.7%	53.8%	72.3%
*Provided a sample	54	40	84	13.0%	12.5%	20.2%
*Ungraded writing	53	40	84	11.3%	15.0%	20.2%
*Peer feedback	54	40	84	22.2%	20.0%	23.8%
*Group writing	54	40	83	18.5%	12.5%	26.5%
*Special audience	53	40	83	22.6%	32.5%	31.3%