

CHAPTER 6

WRITING INTENSIVELY: AN EXAMINATION OF THE PERFORMANCE OF L2 WRITERS ACROSS THE CURRICULUM AT AN URBAN COMMUNITY COLLEGE

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Using both qualitative and quantitative measures, a WAC Coordinator examines the academic performance of ESL students in Writing Intensive (WI) classes at an urban community college. Drawing on comparisons of pass/fail rates and grades of ESL students in WI sections and non-WI sections of the same course, Hirsch reveals higher pass rates and greater retention for ESL students in WI sections. To contextualize and amplify the quantitative findings, Hirsch analyzes two WI syllabi from WI sections available to ESL learners to identify the pedagogical practices which may have contributed to student success. She concludes that ESL students can benefit from and succeed in WI classes that provide pedagogical supports including scaffolded writing assignments, informal writing-to-learn activities which recognize connections between reading and writing, models for writing, instructor feedback, opportunities for revision, practice in oral language development, and faculty open to addressing their needs.

I study, and I think I got the intelligence what is with this, but it's too much. And without help ... I can read, but I need three days. I need some few days to understand this work and compare with my dictionary. —Astrubal, ESL student enrolled in Introduction to Business (Hirsch, 1986, 1988)

I have to read [Dewey's chapter] twice because when I read first time I don't understand. I'm lost ... My questions is I'm not sure

if [Dewey] believe in science or he just believe in philosophy ...
 Because I'm not sure

—Neha, ESL student enrolled in Introduction to
 Philosophy WI (Fishman & McCarthy, 2001).

Though decades apart, the voices of the English-as-a-Second Language (ESL)¹ students above reverberate, reminding us of the seemingly intractable hurdles they must overcome on their quest to academic success. This quest is only intensifying with increasing numbers of students entering our campuses with native languages other than English. The impetus to mainstream ESL students into English-language content courses has quickened over the last decade with more and more of these students finding themselves sitting alongside native speakers of English (NES) in college classes. Today ESL students will not only be enrolled in a college-level content course taught in English, but they may also be taking writing-intensive (WI) courses as part of a Writing Across the Curriculum (WAC) program. Since their start in the 1970s, WAC programs have proliferated with substantial growth over the past twenty years. Thaiss and Porter (2010) report that since the previous nationwide survey of WAC/WID undertaken in 1987, the presence of such programs in the US has increased by one-third. But how much do we know about their effects and effectiveness on the academic performance of second-language (L2) learners? In her comprehensive review of the literature on ESL students in WAC programs and WAC scholarship, Cox (2010) notes that few studies exist on the experiences of L2 writers in courses designated as WI and that WAC research, until quite recently, has not addressed the issue of supporting these students in WAC programs. Research on the impact of WAC programs on community college students is even more limited (Gardner, 2010), perhaps owing to the smaller presence of WAC programs on community college campuses as compared to other higher education institutions (Thaiss & Porter, 2010).

With many campuses implementing such programs along with their concomitant requirements of more complex and genre-specific writing, the demand for academic language proficiencies has become even greater. A number of second language and WAC researchers (Leki, 1995; Zamel, 1995; and Zawacki & Habib, 2010) have provided us over the years with voices of ESL students as they describe the tensions inherent in their attempts to negotiate the differing linguistic demands of courses across the curriculum. Their narratives reveal that ESL students in WAC programs have more than writing to worry about. The transition from an ESL class to academic classes in English is a huge leap in the complexity of material to be comprehended and the corresponding

linguistic and cognitive proficiencies required. The multi-competencies needed to succeed in academic courses are broad and take time to acquire (Collier, 1995, and also see chapters by Center & Niestepski and Phillips [this volume] on the coping strategies L2 students employ to meet the reading and writing demands and expectations of their teachers across the disciplines). This chapter presents research undertaken at one urban community college to add to our understanding of the impact and academic effects of WAC programs on ESL students enrolled in WI classes across the curriculum as well as to identify those pedagogical practices which might explain these outcomes.

The ESL student struggle to succeed academically is readily apparent in the City of University of New York (CUNY), the nation's largest public university system, whose mission is to provide access to quality higher education for the full range of the city's inhabitants, regardless of income, gender, or ethnicity. The university serves more than 480,000 students at 23 colleges and institutions in New York City, including 11 senior colleges, seven community colleges, the Macauley Honors College, the Graduate center, and Graduate Schools of Journalism, Law, Professional Studies and Public Health. The CUNY system is also the nation's most diverse with a student population that is over 41% foreign born. It is against this backdrop of an urban, multi-campus, diverse student body that CUNY sought to strengthen its students' writing proficiencies. Recognizing the vital role that writing plays both in a college education and in future academic and professional success, the CUNY Board of Trustees passed a resolution in 1999 establishing a CUNY-wide Writing Across the Curriculum (WAC) Initiative, which mandated that writing instruction be a university-wide responsibility and that writing proficiency become "a focus of the entire undergraduate curriculum" (http://policy.cuny.edu/board_meeting_minutes/1999/01-25/pdf/#Navigation_Location). Each CUNY campus has developed its own WAC Initiative responsive to its own particular needs though most share pedagogical underpinnings derived from a broad range of WAC theorists and compositionists² (Hirsch & Paoli, 2012). To bring this ambitious university-wide plan to fruition, the initiative is linked to a CUNY Writing Fellows Program which places CUNY doctoral students from a variety of disciplines on each member campus to assist in project implementation.

Of the approximately 230,000 CUNY undergraduates enrolled in fall 2011, 44% spoke a native language other than English. While lower levels of ESL instruction still exist at some of the CUNY community colleges, the ESL designation has virtually disappeared at the CUNY senior colleges. Yet the students have not. As it completes its first decade of its mandated university-wide WAC initiative, the City University continues to address the pedagogical needs of students whose placement tests indicate they are ESL or developmental students

or whose language proficiency issues are not fully resolved upon admission or transfer to the four-year college. Often still lacking college-level proficiency in reading and writing, these students may not fare as well as their more prepared peers as they enter the college mainstream.

With many CUNY ESL students barred from admission to the senior colleges until they are able to pass CUNY-mandated proficiency exams in writing, reading and math, the university's seven community colleges have become the institutions responsible for welcoming these students into higher education and helping them become "college-ready." Hostos Community College, established in 1968 to serve the needs of NYC's impoverished South Bronx community, is an urban, bilingual college of 6000 students located just blocks away from Yankee Stadium. Fifty-five percent of Hostos' first-year students require developmental composition and 43% require developmental reading courses. The majority of these students plan on transferring to a four-year institution and will need more advanced literacy skills to make this transition. The Hostos WAC Initiative, renamed WAC/RAC (Reading Across the Curriculum) in 2005 to reflect the reciprocal relationship between reading and writing, is committed to serving the language and writing needs of all its students including ESL students, speakers of Black Vernacular English (BVE), and Generation 1.5 English-language learners. To that end, the WAC/RAC Initiative provides opportunities for writing and reading at all levels of a student's academic experience both generally throughout the curriculum and in specially designed WI classes. These courses require both informal writing and 10-12 pages of formal writing along with required faculty professional development. (See www.hostos.cuny.edu/wac for a description of WI criteria and policies.) At Hostos, WIs are certified by section based on faculty presentation of a WI syllabus designed for the course they teach. Thus in courses with multiple sections, only some sections may be designated WI. Though WI requirements vary among CUNY campuses, in many institutions, including most of CUNY's 11 senior colleges, WIs are viewed as capstone or higher-level courses. Yet developmental students and ESL students seem most in need of early exposure to increased writing and reading, including in WI courses which can support their evolving literacies.

Hostos requires that students complete two WI courses prior to graduation and permits students at the end of the ESL sequence (ESL 091/092) and developmental levels (ENG 091/092) to enroll in one WI course prior to passing CUNY exams for admission into Freshman Composition. But student gaps in reading and writing proficiencies provide a formidable challenge to a WAC program and raise a number of issues regarding its implementation. Can WAC principles and pedagogies help these students to succeed in college-level course

work? Is it an unfair burden to second-language students to enroll them in more demanding WI sections when non-WI sections of the same course are often available? And is it unreasonable to expect faculty who teach WI courses to also address the more complex reading and writing difficulties these students bring to class?

With course pre- and co-requisites set by departments, and with more departments raising the pre- and co-requisite English-levels for WI courses to a minimum first-year composition level (ENG 110), it seemed the time had come to look closely at the performance of ESL and developmental students in those WI sections which did permit them to enroll along with students at higher levels of English proficiency (HEP). If faculty perceptions that ESL and developmental students could not succeed in these courses were borne out, then perhaps it was unwise to allow them to take WI classes. While the Hostos WAC/RAC Initiative has assessed its program every year since its inception, in spring 2011, with the help of graduate student research assistant Carole K. Meagher, my WAC Co-Coordinator, Andrea Fabrizio, and I began a study to determine if ESL and developmental students could and should compete with HEP students in these sections. We examined student success by combining the performance of ESL and developmental students in WI sections and comparing their success in terms of grades and pass/fail rates to HEP students in WI and non-WI sections of the same courses. Our findings revealed that, overall, ESL, developmental, and HEP students in WI sections passed at a higher rate than they did in non-WI sections and did so with no statistically significant differences according to student composition levels. In fall 2011 and spring 2012 we expanded this work by de-aggregating our data from spring 2011 to isolate the performance of ESL students from developmental students and also examining ESL student performance in WI courses in fall 2011.

This chapter addresses the academic implications of offering WI courses to linguistically underprepared students by drawing on the qualitative and quantitative studies undertaken both in academic year (AY) 2011 and spring 2012 on the effects of WAC and WI courses in the mainstreaming of ESL students. Qualitative data is drawn from student responses to a survey instrument administered to all students enrolled in WI courses that measures student satisfaction with WI courses and self-reported writing improvement. Quantitative data reflecting AY 2011 focuses on two key components of academic success: grades and retention. For the study reported here, these include, 1) examining the pass/fail rates of ESL students in WIs and non-WIs; 2) comparing the grades of ESL students in WI sections to the grades of ESL students in the same courses which are non-WI; and 3) comparing ESL student grades to the grades of students at other levels of English in the same WI sections.

The chapter is divided in two sections. Part I begins with an analysis of the qualitative and quantitative data outlined above and its implications for second-language learners in WAC programs. In order to amplify and provide a basis for understanding the significance of the quantitative data gathered in AY 2011 and to identify those WAC strategies which might have led to these statistical findings, Part II analyzes two WI syllabi from AY 2011 courses—CHE 210 (General Chemistry) and HLT 110 (Introduction to Community Health), both of which have English-language pre/co-requisites making them available to ESL and developmental students as well as HEP students. The syllabi reviewed here have been selected specifically because the faculty who designed them are committed to serving the needs of ESL students and ESL students have had success in passing these sections. What do these WI sections look like, and how do they address the needs of L2 students? In what ways, if any, might they differ from those WI sections that do not permit L2 students to enroll?

Through these pluralistic measures we have sought to determine the effects of mainstreaming ESL students into WI sections as well as to gain an increased understanding of how WAC can best support their emerging literacies. The trends that emerged regarding student success and the suggestions that conclude the chapter may provide new perspectives on ways in which WAC programs and scholars can indeed open rather than close their doors to ESL students (Cox, 2011).

PART I: ASSESSING THE PERFORMANCE OF L2 STUDENTS IN WI SECTIONS

Addressing the needs of ESL students has been a Hostos priority since its founding as CUNY's first college with a bilingual mission. Our attempts to understand how to best serve this population have informed our work since the college's inception. In order to better appreciate the principles that underlie our current WAC program, it is instructive to look back on some of the research which led to the evolution of today's program design. In 1984 Hostos undertook one of the first studies to determine if WAC principles and practices, especially talking and writing-to-learn, were applicable to ESL students through an investigation of the academic performance of ESL students across disciplines (Hirsch, 1986, 1988). Using both qualitative and quantitative measures, the study compared the success of those engaged in principles of "language across the curriculum" through a specially designed tutorial model which included writing-to-learn and the use of talk as a learning tool to a control group of ESL students not partaking in similar practices and receiving no additional

support. The tutorial model also employed cognitive strategies such as activating prior knowledge and making personal connections between new and known material to aid in comprehension of course material. The tutoring-model was discontinued due to lack of funding, but the knowledge we gained regarding ESL students across the curriculum formed the basis for much of our present-day CUNY-funded WAC Initiative.

While the earlier study demonstrated the statistically significant academic gains made by participants engaged in WAC practices and the primacy of talk in the learning process for ESL students, it also documented the difficulties confronted by ESL students in mainstream classes (Hirsch, 1996). Over time ESL educators have become even more familiar with and attuned to the cognitive, linguistic, sociocultural and affective hurdles confronted by these students across the curriculum. In addition to the challenges presented by course readings and vocabulary, note taking, oral communication, and complex discipline-specific writing assignments, ESL students also face the demands of twenty-first century literacies, including blogs, discussion boards, social networks, and wikis, which require navigating the rules and voices of all these differing discourses. (In her chapter [this volume], Du describes the challenge of summarizing information from digital and multimedia “texts,” along with oral texts such as course lectures, for the purpose of providing evidence of one kind or another in response to writing assignments they’re given.) Drawing on our earlier research on the effectiveness of talk and writing for ESL students, we designed our current WAC/RAC Initiative to address the many writing challenges confronted by our linguistically diverse population and to assist faculty in designing curriculum to support their academic success.

As noted previously, the Hostos WAC/RAC Initiative seeks to broaden student experience with writing and reading generally throughout the curriculum and in WI sections specifically. Supporting its view that ESL and developmental students can only benefit from early exposure to more complex reading and writing tasks, it permits students to enroll in one WI prior to passing CUNY exams in reading and writing. It is important to determine empirically if ESL students are provided with the support they need and if they actually can and do succeed in WI courses. The next section describes both qualitative and quantitative measures undertaken to ascertain the effect of WI classes on the academic performance of second language (L2) learners. While the focus is on L2 learners, their success is compared with developmental students and students at higher-levels of English-language proficiency enrolled in WI sections. Proficiency levels are determined by student performance on CUNY-mandated exams: The CAT-W writing test and the ACT Reading test. Students are placed into ESL, Developmental English or Freshman Composition based

on exam scores set by CUNY. The same exams are also used to exit ESL and developmental reading and writing courses. Students must pass these exams in order to enroll in Freshman Comp (ENG 110), a gateway to many other academic courses and programs.

ASSESSING THE WI EXPERIENCE: QUALITATIVE RESULTS

Each semester, students in WI classes are surveyed to determine their satisfaction with these sections and their perceived improvements in the learning of content and writing. For example, they are asked to *Strongly Agree*, *Agree*, *Disagree* or *Strongly Disagree* with statements such as, “*This course helped me understand course topics and concepts*” as well as assess the course’s helpfulness in improving their writing. There is also space for student comments. Table 6.1 breaks down student responses for spring 2011 by English-language levels. “Basic Skills” refers to students who are either ESL or developmental; “Freshman Comp” refers to those students taking Freshman Composition 1 (ENG 110); and “Post-ENG” refers to students who have finished Freshman Composition 1 and are either taking the second semester of freshman year comp, Comp 2; no English course, or higher-level English courses, such as an English Department

Table 6.1: Students who responded “Strongly Agree” or “Agree” by composition level

WI Class Improved:	All Students		Basic Skills		Freshman Comp		Post-ENG	
	n	%	n	%	n	%	n	%
Overall writing	494	87.1	25	83.3	49	86.0	324	89.0
Paraphrasing and quoting	506	89.7	28	93.3	47	85.5	330	91.2
Grammar	516	90.8	28	93.3	50	89.3	336	92.1
Organization	518	92.0	28	93.3	52	91.2	335	93.3
Clarity of main idea	530	93.6	29	96.7	55	98.2	343	94.5
Incorporation of details	528	94.1	28	93.3	50	92.6	347	96.1
Understanding of the topic	540	95.1	29	96.7	54	94.7	350	96.2

elective. “Basic Skills” students are in WI sections which permit their enrollment alongside students at higher English-language proficiency levels. While HEP students may enroll in all WI courses, ESL and developmental students may only enroll in those with pre- or co-requisites at the ESL/ENG 091/092 levels.

In terms of student satisfaction, there appears to be little difference in responses by composition course level. Approximately 83% of “Basic Skills” students report improvements in overall writing as compared to 86% in “Freshman Comp” and 89% who are “Post-ENG.” Indeed, in many categories, the “Basic Skills” respondents report greater improvements than the “Freshman Comp” students with the “Post-ENG” group often reporting the highest levels of satisfaction.

While analysis of the questionnaires does not separate developmental and ESL students, students do note their current English courses on the survey instrument. A sampling of ESL student comments indicates the perceived benefits of the WI course in which they were enrolled along with an indication of the kinds of language difficulties students bring to these classes:

It made my writing to get better. The professor allways [*sic*] was there to help me or explain the work. (EDU 116 Child Development)

I had a great experiece with this course. That is because I learned all with it. With this course I got a more concentrate in reordering and reading . . . (LIN 100 Introduction to Linguistics)

I had taking [*sic*] 2 writing [*sic*] intensive classes already. This one had being the best ever. The professor is very professional and she could help any student to learn and improve their writing [*sic*]. (GERO 103 Introduction to Gerontology)

This course helped me a lot because it has given me an idea how to do a lab report, citation, and researching skills. (CHE 210 General Chemistry 1)

The in-depth analysis of CHE 210 in Part II will demonstrate how the syllabus was designed to further the various skills acknowledged by the student in the last quote. The syllabi for the other WI sections referred to above share many of the same characteristics that might account for student satisfaction and success in these WI courses.

ASSESSING THE WI EXPERIENCE: QUANTITATIVE RESULTS

The survey instrument described above yields important information regarding student satisfaction with WI courses. It is also designed to elicit information as to the amount and kinds of writing that occur in the courses including opportunities for revision, affording some insight as to what actually takes place in the classroom regarding the implementation of WAC/RAC practices. Yet useful as this information is, it is not sufficient to allow for a comprehensive assessment of our program's success. With so little quantitative data on the performance of students in WAC programs in general, it seemed vital to try and gain an understanding of how ESL students perform in these WI sections. As stated earlier, it would not be prudent to encourage them to enroll in classes where their grades would suffer if alternatives (non-WI sections) were available, and students would no doubt avoid these classes if possible. Table 6.2 compares the pass rates of ESL students in WI and non-WI sections of the same courses:

In analyzing these data, we were immediately struck by the small numbers of ESL students enrolled in WI sections, reflecting their disinclination to enroll in these sections even when they are available to them. Yet the figures also indicate that ESL students in WI sections had a higher pass rate than their peers in non-WI sections of the same courses: 86% vs. 75% as well as lower rates of course withdrawal: 7% vs. 16%.

Table 6.2: ESL Pass/Fall rates in WI vs. non-WI sections

		Number	Percent
WWI	Pass	24	86
	Fail	2	7
	W	2	7
	Total	28	100
Non-WI	Pass	43	75
	Fail	5	9
	W	9	16
	Total	57	100

While it is impossible to know precisely the role and extent of writing in non-WI sections, our experiences in collaborating with faculty to transform non-WI sections into WIs provide a window into the pedagogical practices in non-WI sections. Prior to eligibility for WI certification, these courses often rely on multiple choice or short answer exams. Writing assignments in non-WI sections most commonly consist of an end-of-semester 10-12 page term paper which faculty frequently (and justifiably) complain is plagiarized. There is little or no drafting or revision of the paper, and students are often referred to the library for workshops on conducting research with little follow-up to see how well they have grasped research practices. By contrast, WI syllabi reflect more frequent opportunities for both formal and informal writing with a term paper usually assigned as one of at least three other revised writing assignments. From a student perspective, WI classes are more demanding and more difficult, so it is encouraging to observe that ESL 091/092 students in WI courses received a higher percentage of passing grades than ESL students in non-WI sections of the same courses, as shown in Table 6.3, indicating that they are not putting themselves at risk in taking these WIs, and they may actually be receiving tangible benefits.

Table 6.3: ESL student grades in courses by WI and non-WI enrollment for AY 2011

Grade Group	WI		Non-WI	
	Number	Percent	Number	Percent
A	4	14.3	7	12.2
A-	2	7.1	4	7.0
B	2	7.1	9	15.8
B+	2	7.1	6	10.5
B-	3	10.7	8	14.0
C+	2	7.1	2	3.5
C	6	21.4	4	7.0
D	2	7.2	2	3.5
F	2	7.2	5	8.8
INC	1	3.6	1	1.7
W/WU	2	7.2	9	16
Total	28	100	57	100

This determination of higher pass rates lends support to the benefit of engaging ESL students in WAC/RAC principles and practices. Yet how well students do in these classes is also important. Recognizing the importance of a student's GPA, we further examined the actual grades ESL students receive in their WI classes as compared with those of ESL students in non-WI sections of the same courses.

Grade distributions, as shown in Table 6.3, reflect some of the difficulties faced and successes earned by students in WI vs. non-WI sections. For example, students who enrolled in WI sections received a somewhat higher percentage of A's: 22% vs. 19% for those in non-WIs. But students in WIs received fewer grades in the B range: 25% vs. 40% for those in non-WIs. ESL students in WI sections also received a greater percentage of C grades. The average grade for the two groups was a B- for those in non-WIs compared to a C+ for those in WIs, a negligible difference. Yet, as noted previously, their percentage of failing grades and withdrawals (W) was less than those of students in non-WI classes.

Many faculty have expressed fears that ESL students will fail in WI classes, but these concerns are not supported by Tables 6.2 and 6.3. While no firm conclusions can be drawn from such small sample sizes, the trend indicates that ESL students enrolled in WI sections can succeed. But the pass/fail grade analyses reveal a more significant outcome and predictor of student success. The figures suggest a greater retention rate for ESL students in WI sections. ESL students are persisting in these classes, passing them, and not dropping out. While the coursework of WIs may be more intense and difficult for a population still acquiring language proficiencies, it may also be more interesting. It would seem there are supports in place that enable L2 learners to persist and succeed, supports which are absent in non-WI sections of the same course and in WI sections with higher English-language pre/co-requisites. These very supports—the pedagogical practices embedded in WIs accessible to ESL students which might account for their success—will be examined in the review of syllabi in Part II.

While the pass/fail rates and grade comparisons of ESL students in WI sections compared to those in non-WI sections suggests student success in WIs, we also wanted to know how mainstreamed ESL students fared in comparison to their fellow students of varying English-language proficiency levels in the same WI class.

Table 6.4 outlines how ESL students performed in comparison to developmental students and students enrolled in either Freshman Comp I or 2 (ENG110/111) taking the same WI section. ESL students were enrolled in WI sections of courses in Biology, Business, Chemistry, Community Health, Education, Latin American & Caribbean Studies, Linguistics, Office Technology, and Physics. Data has not been broken-down by discipline though this is something that merits future research for all of our WI sections.

We note that the number of developmental students (ENG 091/092) reported here is too small on which to base any observations. While an additional 18 developmental students were enrolled in other WI sections, these sections did not enroll any ESL students for comparison purposes. There were also students enrolled in the WI sections examined above who had already

Table 6.4: Comparing grades of ESL students/developmental students/HEP students within WI classes AY 2011

Spring 2011: ESL 091/092 Students by WI Course Grade						
WI Grade Group	ESL091/092		ENG091/092		ENG110/111	
	ESL		Developmental		HEP – Fresh Comp	
	Number	Percent	Number	Percent	Number	Percent
A	2	25	1	50	10	29
B	4	50	1	50	10	29
C	1	13	0	0	8	24
D	0	0	0	0	2	6
F	1	13	0	0	4	12
W	0	0	0	0	0	0
Total	8	100	2	100	34	100

Fall 2011: ESL 091/092 Students by WI Course Grade						
WI Grade Group	ESL091/092		ENG091/092		ENG110/111	
	ESL		Developmental		HEP – Fresh Comp	
	Number	Percent	Number	Percent	Number	Percent
A	4	20	1	20	17	25
B	3	15	3	60	19	28
C	7	35	1	20	13	19
D	2	10	0	0	3	4
F	1	5	0	0	7	10
INC	1	5	0	0	1	1
W	2	10	0	0	9	13
Total	20	100	5	100	69	100

completed Freshman Comp, but since Freshman Comp is the level upon which WI enrollment is often based, we have focused on the grades of this group in our comparison to the ESL and ENG 091/092 students and not those students who have already completed all English requirements.

It is not surprising that the Freshman Comp group performed well. As Table 6.4 indicates, they had a higher percentage of A grades (54% vs. 45%) than ESL students. Their percentage of B grades was a bit lower—57% vs. 65%—though ESL students had a greater percentage of C grades—48% vs. 43%. HEP students also withdrew (13% vs. 10%) and failed (22% vs. 18%) at slightly higher rates than ESL students.

In addition to an analysis of student grades in WI and non-WI content courses, our examination of the performance of ESL students revealed some unanticipated information with significant implications for our WAC work. Those students taking a WI course concurrently with their ESL course had a greater pass rate in the ESL class, and thus moved onto Freshman Composition more quickly than ESL students who were not taking a WI. Forty-one percent of ESL students not taking a WI passed their ESL class compared to 52% of those enrolled in a WI. While reiterating our earlier precaution about small sample sizes, the data suggest that, if engagement with WAC principles and practices in WI courses can improve student success in ESL classes enabling them to move onto to more advanced levels of English and college-level courses, then more WI classes should be made available to them—classes that contain the supportive pedagogies discussed in the syllabi below.

PART II: ESL STUDENTS WRITERS IN THE SCIENCES AND SOCIAL SCIENCES

As we observed in our initial study published in 1986, multiple measures can provide multiple perspectives with each insight building on and enhancing the other. The comparison of grades and pass/fail rates provides a picture of how student learning is evaluated in the college setting. Grades provide students with a powerful signal as to what constitutes “successful” learning. The grade comparisons discussed earlier offer an aspect of how students learn, but grades do not tell us how these results were obtained. In what ways might a WI section available to ESL students support their success in meeting course demands? What strategies, techniques, and/or assignments are embedded within the course that facilitate student learning and account for their success and satisfaction? Below is an examination of two representative WI syllabi selected from among the WIs which are available to advanced ESL and developmental

students that are designed to help them access and respond to discipline-specific texts and concepts through both reading and writing. The strategies employed here provide a good roadmap for supporting ESL students in mainstreamed WI courses.

WRITING INTENSIVELY IN THE SCIENCES: CHE 210 GENERAL CHEMISTRY

With faculty in the natural and physical sciences often resistant to incorporating WAC principles and practices, it was a welcome surprise to find faculty in these areas receptive not only to creating WI syllabi, but also to making them accessible to L2 and developmental learners. The excerpts below, from a WI syllabus for CHE 210, General Chemistry I created by Professors Nelson Nunez-Rodriguez and Yoel Rodriguez in collaboration with CUNY graduate student Writing Fellow Kate Wilson, point to the ways in which courses in the STEM fields can utilize WAC strategies to improve the learning and literacy needs of students representing a wide-range of language proficiencies. Rather than relying on a lecture-mode delivery of material, a pedagogy of limited success for L2 learners because of its reliance on student ability to comprehend concepts orally and synthesize and paraphrase material quickly in order to take effective notes (see Du [this volume] for more on the challenges ESL students face when attempting to learn from lectures), this class makes frequent use of a wide variety of informal writing assignments meant to help students improve their conceptual understanding of course material. At the same time, it provides an introduction to writing in the disciplines (WID) while helping students bridge the use of discipline-specific language with that of language for a broader audience.

Writing in CHE 210

In this description, assignments and assignment passages have been copied from the professor's syllabus, followed by a discussion of the pedagogical benefits.

Informal writing

Most of the informal writing will happen in the lecture component of this course through the Blackboard Discussion Board. A smaller part of the informal writing will be done in the laboratory.

Informal writing in lecture

Each week students will have the opportunity to choose from

three prompt options posted by faculty on the Discussion Board. Two of these prompts remain the same throughout the semester with only the necessary thematic adjustments.

Students are expected to respond to at least 12 Discussion Board exercises throughout the semester (Blackboard tallies student participation.)

By being allowed to choose three prompts posted on the class discussion board, students are actively engaged in the learning process and, crucially for L2 learners, given the opportunity to use language to make meaning not only for themselves, but also for an audience of teacher and peers. The instructions for the Blackboard prompts highlight this further:

Blackboard prompt

Based on what you learn in Chapter “Atoms, Molecules, and Ions” (please note that the title will change weekly), craft your own exam question. You must justify why you consider this question should appear in the exam. For this, I suggest that you explain what skills are tested in the question you are crafting. For example: Is your question asking fellow students to remember valuable information? Is it asking to analyze information, or maybe apply knowledge, etc.? Any kind of question is accepted (multiple choice, true or false, short filling, short essay, etc.). In addition to crafting your own question you can also engage in dialogue with other students based on what they submit. You can give your opinion to support a previous posted question and/or you can add a comment to somebody else’s opinion showing your support, agreement or disagreement with another student’s comment regarding a question or the tested skill.

The assignment above requires that students create their own exam questions and comment on each other’s questions. This opportunity to articulate material in their own words with their own language resources is vital for L2 learners (Hirsch, 1986). The assignment also allows students to make decisions as to what is important or “test-worthy,” thus demonstrating how much they have understood of the class material and if their perceptions of what’s important match those of the professors.

Connect the content of Chapter “Chemical formulas, Reactions, Equations, Stoichiometry” (please note that the title will change weekly) to your daily life. Have in mind that I am not asking for your opinion; I want you to think of an example of how the material we covered about “Chemical formulas, Reactions, Equations, Stoichiometry” relates to your daily life.

Unable to rely on pre-coded experience with chemistry, students must be helped to forge a link between new and existing material. Earlier research at Hostos established the importance for learners of finding personal significance or establishing a personal connection to the new subject matter (Hirsch, 1986). Bransford (1999) defines the learner’s task as activating previous knowledge and bringing it into contact with new material, seeking the familiar in the unfamiliar and vice versa. The assignment above asks students to make this personal connection by relating the chapter’s content to their daily lives. This device to aid cognition and retention will reappear throughout the syllabus.

Summary of articles

An online scientific article for the lay public will be chosen (for example, from the science section of The New York Times or other scientific online publications) and posted on Blackboard for students to read. Summarize the three main points of the article adding a personal comment on the article, for instance, whether you find the article informative, if it is clear, if you agree with the argument presented, etc._

Peer-reviewing a lab report

Each student will have the opportunity to review in written form the draft of the formal laboratory report of another student. This will be done in class. (More about this activity in the “formal writing” section of this syllabus.) The professor will give feedback on the Discussion Board postings in class and, whenever possible, the professor will start the class by talking briefly about students’ input on Blackboard.

This low-stakes assignment to summarize articles allows students to synthesize the science material in their own words. The addition of a “personal comment” again allows them to make a personal connection to the material

bridging the new and the known. The lab report requires an initial non-graded draft providing an opportunity for students to “try-on” this WID format, and, through peer review, places students in the role of teacher/expert giving them more control of their learning and letting them make active use of their own language resources.

Informal writing in the laboratory

In order to prepare for a laboratory session, students will be asked to read the “Procedure” section and “translate” the essential information into a flowchart. Aside from preparing the student for the experiment to come, this assignment will train the student in how to synthesize information. The flowcharts should be presented at the beginning of each lab session and will count as participation but will not be graded.

Sample of the assignment

Read the “Procedure” section of your Lab manual. When you finish reading make a flowchart that synthesizes the information offered in the narrative. Keep in mind that your flowchart should function as a “recipe” for the experiment you are about to do. The instructor will discuss the flowchart mechanics and will model one on the board for the first two labs to help you produce your own for the following labs.

Example:

Experiment: Use of aqueous (aq) chlorine ($\text{Cl}_2(\text{aq})$) to identify iodide salts.

Directions: In a small test tube, dissolve a small amount (about the size of a pea) of sodium iodide, NaI, in 1 mL of distilled water; add 5 drops of bleach. Note the color, then add several drops of mineral oil, shake, and allow to separate, which takes about 20 sec. Note that the mineral oil is the top layer. Record your observations on the report sheet.

The language of the textbook and lab manual may be difficult for many of the students due not only to the discipline-specific vocabulary but also because of the “every day” and idiomatic vocabulary that might be unfamiliar to L2 and developmental students. By asking students to “translate” the *Procedure* section of the lab manual from written form to a flow chart, students are able to synthesize, re-conceptualize and re-visualize the material, in essence

making the text visible and providing them with another means to access difficult text.

Formal writing

There will be nine lab reports in the course. Six of these reports will be reviewed and commented on by the professor in order to reinforce students' familiarity with the lab report format. Students are not required to submit a revised/rewritten version. Three lab reports will require revision and one of them will serve as the basis for an essay.

In week 3 of the semester, students submit a draft of their first lab report for feedback and revision ensuring that they become familiar with lab report format early on in the semester. One of the lab reports will later become the basis for a larger writing project, described below:

Consumer Information Pamphlet: “Chemicals in Everyday Life”

This assignment starts in week 7 of the semester and

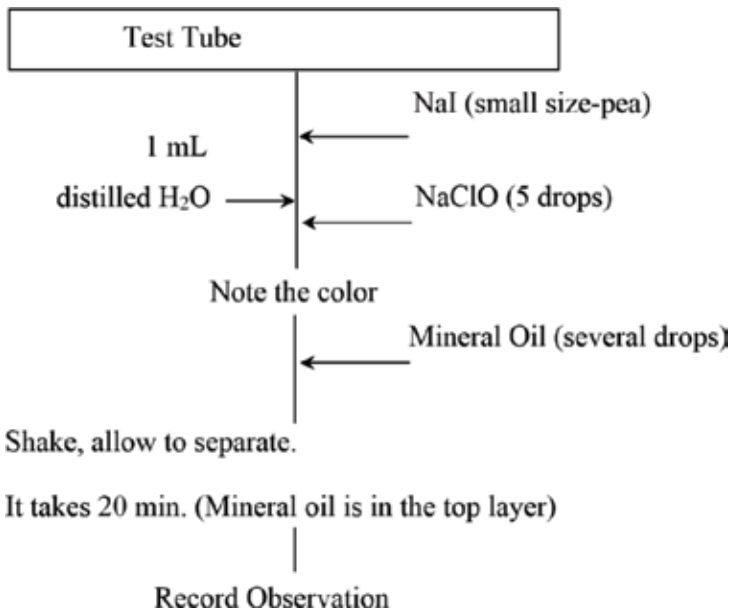


Figure 6.1 Flowchart

continues until the end of the semester. You will use your lab on “Chemicals in Everyday Life” as the basis for a larger writing project: a “Consumer Information Pamphlet” about one chemical component frequently used in daily products. Write with a hypothetical audience in mind. Your written product should resemble a Consumer Information Pamphlet very much like those that accompany most medications.

The goal of this assignment is to help you become familiar with common chemicals, their properties and relations with other chemicals.

As evidenced above, the formal writing components of this class are scaffolded and guide students through a variety of connected tasks. The lab reports provide an introduction to writing in the disciplines. Support is provided through professor feedback and opportunities for revision. As described above, one lab report will become the basis for a new writing task, a “Consumer Information Pamphlet.” In order to write this pamphlet for a new, non-academic audience, students will have to be thoroughly familiar with the material and be able to present it in a way that mimics the voice and tone of these information booklets. The instructor delineates the steps students will follow as they expand the lab report and eventually reconfigure its information in a new genre. Steps include: 1) a lab report on “Chemicals in Everyday Life” which receives instructor feedback; 2) field research conducted in students’ homes to identify the chemical components of kitchen and bath products; 3) an informal reflective writing assignment regarding the chemical products found in the home; 4) formal research that begins with Wikipedia for general information and continues with articles from a scientific peer-reviewed database; and 5) incorporation of information gathered through observation and research into a first draft of a Consumer Information Pamphlet. Students are instructed as to specific content and to write for a “lay audience.” Significantly, the instructor provides an example of the type of writing associated with this genre. Feedback will be provided leading to submission of the revised pamphlet on the last day of class.

This carefully scaffolded assignment offers students feedback and support and makes visible the processes they must undergo to successfully complete the tasks. Students are actively engaged in the process moving from a representational flowchart, to a written lab report, and then through research, reflection and revision, to a transformation of the material studied into a new genre. All along the way, from informal through formal assignments, students are permitted

and encouraged to make use of their own language resources to gain multiple perspectives on the material. By semester's end, they will reinforce their conceptual comprehension of this material by engaging in a "Peer Reviewed Lab Report" in which they critique each other's work and make suggestions for revision. A reliance on the textbook (written on a more advanced reading level) and lecture would not provide L2 students with the support they need to access and make sense of this material. Instead students are able to make connections among the concepts introduced, find a personal connection to the material, and become comfortable using the new language of a discipline while furthering their comprehension of course material.

Other ESL researchers have observed the success of these kinds of strategies. Leki (1995), for example, notes how ESL students seek out models of writing to help them with academic writing tasks, but their efforts are often thwarted by selecting inappropriate examples. In contrast, the CHE 210 professors provide students with models for writing an information pamphlet offering some familiarity with the kind of discourse required. Fishman and McCarthy (2001) observe the importance of peer interaction and talk for ESL students as a means of making sense of the material. As described earlier, the Hostos WAC/RAC Initiative draws on a learning model that employs principles of "language across the curriculum." In CHE 210, students have frequent opportunities to meet with peers and discuss the material. Talk, then, is central to the learning process and, while theorists have applied these findings to native English speakers (Martin, D'Arcy, Newton, & Parker, 1976), they are all the more relevant to ESL students who are often unable to articulate what they have learned in writing before they have had a an opportunity to orally "try on" the language of the discipline. The WI syllabus for CHE 210 also employs principles of active learning (Bruner, 1966, 1969; Fishman & McCarthy, 2001; Torbe & Medway, 1981) in which students are actively engaged in the learning process. For example, in CHE 210 students write their own exam questions, becoming both teachers and learners as they focus on questions posed by themselves and their classmates. The social science syllabus examined next echoes a number of these same strategies.

WRITING INTENSIVELY IN THE SOCIAL SCIENCES: "INTRODUCTION TO COMMUNITY HEALTH"

A review of the syllabus for "Introduction to Community Health," designed by Professor Iris Mercado in collaboration with CUNY Writing Fellow Dave Pier reveals ways in which it too is designed to accommodate the language

needs of L2 and developmental students. There are a number of informal assignments such as describing the resources provided by the Department of Health Website; responding to student-selected newspaper or magazine articles related to public and community health, including writing brief summaries; and an analysis of an article on epidemiology supported by instructor prepared study-guide questions. There are two formal writing assignments that require writing for different audiences and purposes as well as student use of oral language skills. While both formal assignments are carefully scaffolded, here I describe in detail only the first one, a “Community Need Assessment and Health Promotion Programming,” which is completed in the following four steps: 1) *My Community Health Survey* for which students are referred to a government website to answer questions regarding the health profile of their community; 2) *My Neighborhood Mapping* which requires students to assess the needs and resources of one city block of their neighborhood and write a two-page assessment of the health needs and resources of that block along with a detailed map; 3) *Community Interview* for which students select a specific health problem in their community and a target population and then identify persons that match the health profile and interview them, following specific instructions. This interview results in a two-page report; and 4) *Letter of Intent for a Health Promotion Program Grant Proposal* in which students write a four-page letter for a grant proposal application.

This scaffolded assignment clearly supports student learning not only through the series of steps provided but also through the additional support provided for completing each of the steps. For example, the survey in step 1 helps students gather the data they need. It assumes they are unfamiliar with designing survey instruments, and so provides a template for them to follow. They are also given specific questions to answer regarding their community based on their visit to the government website including demographics and their effects on health services. And, using these data, they are asked to discuss and present to the class the potential interventions for the issues they identified along with their community overview. To accomplish step 2, they are offered specific guidelines to determine possible neighborhood health or safety problems. The professor specifies how many causes and resources they need to use, instructs them to “explore two blocks” if necessary, and prompts them to “Remember to look up and down, as well as from side to side.” They attach the map they sketched when they have finished the walk and write a two-page assessment of the block. Each of the remaining steps also provide guidelines; for example, the interview requires students to describe prevention measures for the health problem they selected and then interview a family member or friend about this problem, resulting in a two-page report that includes a summary and suggestions for

further research. The grant proposal letter requires students to apply to a mock foundation for funding of a project related to public health. A template and model is provided to assist students in writing this proposal.

As in the chemistry WI class, students are provided with meaningful opportunities for writing throughout the community health WI, both to increase their comprehension of the discipline and to experience writing specific to the professional health care field. Both courses encourage students to produce graphic representations of the material being learned—the chemistry flow chart and the neighborhood map—a strategy that provides ESL students with another avenue for processing information and expressing what they know (Fu, 2007). For L2 learners specifically, the variety of both informal and formal writing assignments, the guided procedures and steps to follow, the oral interview encouraging active language use, the detailed scaffolding, and the strategies for responding to written texts all enable ESL students to utilize multiple resources as they try on the language of a discipline.

This examination of the WI syllabi for General Chemistry and Community Health demonstrates how WI classes can accommodate the needs of L2 learners and developmental students. Each provides multiple pathways for students to access new and difficult content material including formal and informal assignments, scaffolding, models of writing, frequent feedback throughout the process and opportunities for revision. These sections do not assume student familiarity with modes of writing and recognize that students do not always bring sufficient background knowledge to these tasks. In addition to strengthening student writing proficiencies, the assignments also provide practice in oral language development and allow students to use their oral language strengths rather than rely solely on writing as a means of participating in the class and obtaining information. This may be a particular benefit for generation 1.5 students who have attended US high schools or have lived in the US for a number of years and have developed oral language proficiency (Reid, 2006). It is interesting to note that the professors who created these ESL-accessible WI sections for General Chemistry and Community Health are themselves non-native speakers of English which may explain their sensitivity to the needs of L2 learners as well as their willingness to accept them into their classes.

The WI courses examined above also acknowledge the connections between reading and writing and provide students support in reading and responding to written texts through strategies such as paraphrasing, summarizing and reacting. This integration of reading and writing avoids what Leki (2001) has termed “reading for no real reason” (p. 176) or the isolated teaching of reading skills devoid of meaningful content. “Real reading,” Leki argues, should not be deferred until ESL students are deemed adequately prepared, but that

“plunging into the struggle with meaning” is in itself a means of preparation (p. 181) (For further discussions of the connections among writing and reading for ESL students, see Center & Niestepski and Du [this volume]). The connections between reading and writing and the interconnections between texts frame much of our WAC work for all students but may have particular significance of L2 learners across disciplines. As part of our Hostos Reading Across the Curriculum (RAC) component, students are encouraged to write before, during and/or after reading, although a cross-section of our WI courses reveal these practices occur in varying amounts. Hirvela (2004) underscores the value of “writing to read” and “reading to write” and observes that writing about text helps students engage it more directly. “The physical act of writing creates a kind of contact point with the text and brings perceptions and impressions half-formed during reading out of the shadows and into the light of emerging understanding” (p. 75) lending support to the use of “writing to read” in the college classroom and its value in enabling L2 students to further their acquisition of academic literacy. Hirvela highlights especially the benefits of summarizing, synthesizing and responding to written texts, writing activities which help students focus on the important features of a text, draw comparisons between texts and reflect on their learning all the while revealing areas of disconnection between the reader and text (see Du [this volume] for an examination of the role of summary writing as a writing-to-read strategy for ESL students). It is therefore particularly reassuring to see these strategies implemented in the syllabi presented here and may account for the success of ESL learners in these classes.

INSIDE THE WI FOR STUDENTS WITH HIGHER ENGLISH-LANGUAGE PROFICIENCY

All of the WI classes that are open to ESL and developmental learners utilize many of the strategies described above and most include assignments that are scaffolded. While all WI sections require informal and formal writing and opportunities for revision, those that are **not** available to ESL students and developmental learners do not always provide the support seen in CHE 210 or HLT 110. In many WI courses, for example, the assignments are not scaffolded. Frequently students are merely instructed to write a research paper with little guidance compared to the strategies for discourse negotiation provided in the sample syllabi reviewed here. An assignment for the WI course HIS 4665: US History from Reconstruction to the Present, for example, instructs students as follows:

Using the documentary films we saw in class, primary

documents and the textbook, write a paper that compares the two cases [Sacco-Vanzetti and Scottsboro] and the historical circumstances under which they took place. Your paper must explain:

What are the cases about? Who did they involve? When and where did they take place? What were the charges against the defendants?

What are the main differences and/or similarities between the cases? (emphasis should be on the meaning of the cases, not on petty details such as the different dates, different charges or different penalties)

What is their overall significance? For example, what do they tell us about American society and politics in the 1920s and 1930s? What do they suggest about American attitudes toward class, race and immigration?

What were the implications or impact of these cases on American society?

What are the lessons we can draw from these two cases?

Be sure to include a full bibliography. Below are some reading suggestions.

Although students are provided with questions to consider, it is assumed that they are prepared to undertake the steps necessary to write a research paper and that they know how to conduct research, summarize and write compare/contrast essays. While they are required to submit a draft, there is not much scaffolding built into the assignment. Even students with higher English-language proficiencies may struggle with this assignment, and it is obviously not as “user-friendly” as the two previous WI syllabi which outline steps to follow and include frequent feedback throughout the writing processes.

Other sample WI assignments for HEP students had their own impediments to ESL student success. Many were too broad, a common flaw in writing assignments (Reid & Kroll, 2006) allowing for too few pages to accomplish broadly conceived tasks that often also required advanced research and reading skills. Some offered little assistance in selecting or developing topics. Others

failed to provide an audience and purpose, unlike the CHE 210 Consumer Information Pamphlet or the HLT 110 Letter of Intent, leaving students directionless as to how to frame information. But what all WI classes for HEP students lacked was an instructor willing to address ESL language issues even when their syllabi did contain many of the strategies which can lead to ESL success.

CONCLUSION AND IMPLICATIONS

The research conducted at Hostos Community College in AY 2011 on the role of WAC pedagogies in furthering ESL students' development in writing and improving conceptual comprehension of course material provides demonstrable benefits regarding their involvement in WAC programs and in WIs carefully designed to address their needs. Though small numbers of ESL 091/092 students enrolled in the specially designed WI sections, their pass rates were higher than ESL students in non-WI sections of the same course, they did not withdraw, and of great significance, they had improved pass rates in the ESL class, the gateway class to freshman composition and a host of additional college programs. As noted earlier, however, the surprisingly small numbers of L2 learners (and developmental students) in available WI sections in 2011 seems to indicate that most preferred to take non-WI sections presumably fearing the greater linguistic demands of a WI section. Their reasons for avoiding WI sections merit further study especially in light of the outcomes presented here. It is possible that those who enrolled in WI sections were stronger and/or more confident students, which could also explain their pass rates and good grades.

The WAC pedagogical principles employed in the WI classes described here are vital to all students, not just ESL students or developmental learners. Though over 80% of students in Hostos WI classes are at the freshman composition level or beyond, many of these students continue to struggle with meeting the demands of writing in the disciplines. For example, a HEP history student enrolled in Freshman Comp 1 still grapples with English-language proficiency as evident in his written comments on the WI survey: "Great experience [*sic*] as the feedback and overall teaching method made my writing; and comprehension improve since start [*sic*] of the semester." It is not surprising that language problems persist since so many of our students begin at the developmental or ESL levels. The spring 2011 analysis of students in WI classes indicated that 20% of the HEP students enrolled in Freshman Comp 1 or 2, and 15% of those who had completed all English requirements had taken at least one ESL course in their histories at Hostos. Other HEP students attend

part-time or take breaks over the course of their study resulting in regression of language proficiency. A HEP nursing student observed, “This writing-intensive class ... helped me to revisit my writing skills since I never took another English course since 2008,” reminding us that all students, even proficient ones, risk skills degradation if they don’t have opportunities to practice and reinforce their written proficiencies (Roberts, 2008).

Our review of WI syllabi presumed that writing assignments were written out for students, a presumption WAC programs need to challenge. In many instances, assignments in classes which were not designated as WI were sketchily written (if at all) and often augmented by oral in-class amplification as to instructor expectations. Writing Fellows working with students reported that once out of class and pondering the assignments, students could no longer recall the orally added information or weren’t sure if they understood it, a problem for many students, and especially L2 learners. Making sure students receive written prompts is a WAC program priority and often the first step in faculty professional development.

The WI syllabi reviewed here have English-language pre/co-requisites that make them available to advanced ESL students and developmental learners, but more than available, they are accessible. Assignments are comprehensible, scaffolded and reflect course objectives. They have well-designed prompts, clear instructions and vocabulary and syntax appropriate to the task. They provide opportunities for revision and instructor feedback. They also make frequent use of a variety of informal “writing-to-learn” assignments drawing on the relationship between reading and writing and permitting students to engage material orally before writing.

We are all writers. We write letters, poems, emails, memos, reports, text messages, tweets and much more. Writing is an integral part of who we are and how we express ourselves. For students for whom English is not a first language, learning to write clearly and concisely is a tremendous challenge. But what our data show is that it is not overcoming the challenge that is the important part; it’s accepting the challenge in the first place. The fact that ESL students are choosing to stay in WI classes with their greater demands on writing proficiencies and are passing these classes at a higher rate than their non-WI counterparts indicates that participating in well-designed WI classes that utilize the academic supports described in this chapter may be in and of itself an academic benefit. The research reported here is only a beginning and more is needed. As educators, we must keep the doors to education and opportunity wide open, providing our students with the means to succeed. Perhaps the WAC/RAC studies discussed here will encourage WAC programs to help ESL students find their place across the curriculum.

NOTES

1. In this chapter I am using the terms English-as-a-Second Language (ESL) and L2 (second language) learner to refer to students who are learning English in addition to their native language. While they are all English language learners (ELLs), the students studied here are enrolled in ESL programs, and that is how they are identified in the college.
2. While each CUNY campus has developed its own WAC program responsive to its needs, most share a common set of WAC principles and practices such as the connections between writing and critical thinking, the value of “writing-to-learn” and exploratory writing in the classroom, writing as a process including revision, the importance of crafting assignments which are developmentally appropriate and reflect course objectives and the need for appropriate assessment of students’ written work. Many use John Bean’s *Engaging Ideas* as a primary faculty development text.

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