Improving Success, Increasing Access: Bringing HIPs to Open Enrollment Institutions through WAC/WID

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Abstract: Today, and historically, the presence of WAC/WID programs in the community college setting remains anemic when compared to Ph.D.-granting institutions. This fact is particularly troubling considering the AAC&U's research on high-impact practices and its correlation with WAC/WID theory and practice. This article empirically investigates the WAC/WID program at one open-access college—Daytona State College—to assess its viability in relation to student success and faculty development in a local context that includes an at-risk and/or historically underserved population. The findings show that students perform better academically in WAC/WID-redesigned courses, as measured by grade performance, regardless of ethnicity. Students also have statistically higher success rates compared to students in non-WAC/WID-redesigned courses. Finally, students qualitatively report having better experiences in those courses. Faculty members in WAC/WID-redesigned courses also experience improvements, most importantly increases in productivity and confidence in designing, implementing, and assessing writing assignments. This article suggests that WAC/WID programs in community colleges can be successful, but that institutional barriers remain.

Introduction

When Chris Thaiss and Tara Porter (2010) published the results of the International WAC/WID Mapping Project, they confirmed that the early promise for WAC/WID in community colleges (Stout & Magnotto, 1987) has given way to a chasm: Only 33% of community colleges report a WAC/WID presence compared to 65% at Ph.D.-granting institutions (Thaiss & Porter, 2010, p. 541). Other research from the 2005 national TYCA Research Initiative (Roberts, 2008) further authenticates the experience felt by those who research and teach in community colleges: Writing across the curriculum and writing in the disciplines programs are few and far between.

The anemic presence of WAC/WID programs in community colleges is especially interesting, and ultimately troubling, when seen through the lens of the AAC&U's research on high-impact practices, specifically George Kuh's (2008) "High-Impact Educational Practices: What They Are, Who Has Access to Them, and Why They Matter." Among the ten discrete high-impact practices, "writing-intensive courses" (p. 10) emerge as a clear salute to WAC/WID's mission and its effect on student learning, engagement, and, ultimately, success. It should be acknowledged, however, that while writing-intensive courses are perhaps the most obvious corollary to WAC/WID programs,

WAC/WID, as theory and practice, often incorporates other HIPs such as "collaborative assignments and projects" (p. 10). Ochsner and Fowler (2004) characterize "yoked together" (p. 122) teaching/learning strategies as problematic for defining WAC/WID and assessing its impact on students. However, Kuh calls for student participation in "at least two high-impact activities during his or her undergraduate program" (p.19), and Finley and McNair (2013) report "the measurable, significant, and positive relationship between students' *cumulative* participation in multiple high-impact practices . . . and their perceived engagement in deep learning and their perceived gains in learning" (p. 9). Together, Kuh and Finely and McNair allow us to see that what was previously levied as a criticism is in fact a potential selling point for WAC/WID, especially in community colleges where budget concerns certainly influence the number of programs available to faculty and students.

Community colleges are essential in efforts to address the disparity between the "groundswell of interest" in HIPs following the 2008 Kuh report and the later reports that show a failure to move HIPs from "boutique" programs to the "unavoidable curriculum" (Kuh & O'Donnell, 2013, p. vi). Much of the curriculum at open-enrollment institutions like community colleges is in fact "unavoidable curriculum" (i.e., general education requirements); therefore, the AAC&U's call for institutions to distribute high-impact educational practices throughout the student experience could be facilitated by a robust WAC/WID presence on open-enrollment campuses.

Furthermore, because community colleges are often *the* point of access to higher education for "historically underserved students," and other at-risk populations such as low-income students, WAC/WID in community colleges could provide these students ample opportunities to encounter multiple HIPs in the first two years of their undergraduate education—no matter their degree path or program affiliation. Consequently, the multiplier effect from several HIPs (e.g., Kuh, 2008; Finley & McNair, 2013, Brownell & Swaner, 2010) could be realized by students who are most often denied access to them.

Despite WAC/WID's potential, WAC/WID programs have failed to thrive in the two-year college context (Stout & Magnotto, 1987; McLeod, 1988; Stanley & Ambron, 1991; McMullen-Light, 2010). Still, these challenges are not sufficient to warrant throwing in the towel. If high-impact practices have measurable effects on student engagement and success, and if institutions in Florida and other states are realizing the punitive financial consequences of poor success and graduation rates by way of performance-based funding, the time is ripe for WAC/WID advocates to speak directly to administrators and interested parties to show how well-designed WAC/WID programs support high-impact practices and produce positive, measurable effects on both faculty and students. Demonstrating these positive effects, specifically within open-enrollment institutions, is acutely important since these administrators often question research done in more selective institutions—specifically with regard to its viability in, and applicability to, the open-enrollment environment.

Pursuant to this disconnect and research gap, our study sought to determine whether a WAC/WID program in an open-enrollment institution would generate positive results for students and faculty. We found that engaging faculty in an intensive study of WAC/WID best practices, combined with 15 hours of in-person workshop focused on redesigning a course to incorporate these best practices, correlated with improvements in student grades and success rates. Additionally, students and faculty both reported increases in confidence and learning. And all of this happened at an open-enrollment institution that primarily functions as a community college.

In order to contextualize these results, we first set out a brief overview of Daytona State College and how the WAC/WID program functions within it. We then explain the methods used to gather and analyze data, offer further details on the results themselves, and finally conclude with a discussion of the implications of these results for both future research and practical application.

Overview of Program Design: WAC/WID at Daytona State College

Daytona State College, formerly Daytona Beach Community College, is a state college in the Florida public system. It offers an adult education program, certificates, A.S. degrees, A.A. degrees, and a few baccalaureate degrees in specialized areas with job demand in the region, such as nursing, education, applied business and engineering technology. Though the baccalaureate programs have a selective admission process, the vast majority of the programs at Daytona State are open-enrollment. This includes the A.A. program, in which most of the faculty who participate in the WAC/WID program teach.

WAC/WID at Daytona State College is a voluntary professional development program offered to all full-time faculty since the spring of 2013. Each fall, interested faculty fill out a program application and attend a 10-minute interview prior to selection into a yearly cohort that begins each spring. In selecting instructors, we aim to bring together two to three faculty from related fields, while maximizing interdisciplinarity in the large cohort. In reality, however, we only "select" faculty when more faculty apply than we can accept, as was the case for the 2014 cohort, but not the case for the 2013 or 2015 cohorts.

Once selected, instructors begin their journey by completing a faculty survey and by administering a student survey in the course they plan to revise. All of this occurs before any WAC/WID intervention begins so as to provide baseline data. The first point of intervention happens by way of a two-hour orientation, held in person during spring planning. At this point in the program, faculty receive John Bean's (2011) oft-dubbed "WAC bible," *Engaging Ideas*, and receive specific information about the program's goals and its elements: the online component and the face-to-face workshop series.

During the online component, which we deliver through the college's LMS, faculty read selected chapters from *Engaging Ideas* and responded to discussion questions (and their peers' responses to those questions) on a weekly basis for approximately 10 weeks. The face-to-face summer workshop series is an intensive 13-hour, five-day experience designed to offer focused, hands-on support for faculty putting theory into practice. Specifically, during the face-to-face workshops, faculty:

- generate writing outcomes for their courses;
- create and/or revise at least three assignments that incorporate writing;
- scaffold assignments;
- create clear rhetorical contexts for assignments;
- incorporate transparent grading criteria; and
- adjust assignment schedules to provide students opportunities for collaboration, revision, and feedback.

Later, when we use the term "post-WAC/WID intervention," we are speaking specifically of the redesigned courses taught by faculty who have, at minimum, completed orientation and the online component, as well as produced artifacts that reflect the components of the face-to-face workshop series.

The faculty implement their revised, post-WAC/WID intervention courses during the subsequent fall semester and are observed at least once by the WAC/WID coordinator or a WAC/WID facilitator. Near the end of the fall term, faculty complete their survey and administer the student survey to students currently enrolled in their post-WAC/WID intervention courses. This completes their

official participation in WAC/WID, although some faculty choose to return as facilitators for a subsequent year.

For the first three iterations of the program (2013, 2014, and 2015), faculty grantees received a $1,200 stipend upon completion of the online component and face-to-face summer workshop series. Faculty at Daytona State teach at least five courses per semester, hold office hours to student support services, and serve on committees. We knew that enlisting faculty in a rigorous, writing-focused professional development program would be challenging. Informal water-cooler talk, as well as more formal discussions with faculty as we marketed the program, revealed that Bean's (2011) declaration that "College teachers everywhere now understand that teaching students to write is a shared responsibility" (p. vii) is not universally accepted. Stipends, we hoped, would give faculty incentives to participate in an unfamiliar (and, to some, unrelated) professional development program that would demand a significant time commitment and a significant course revision.

Methods

The overarching goal of this project was to assess what, if any, impact our WAC/WID program had at the college and whether those effects correlated with the effects observed from HIPs (Kuh, 2008; Finley & McNair, 2013). We were interested in two separate impacts: (1) measurable changes in student performance—a specific gap in WAC/WID literature mentioned by Ochsner and Fowler (2004)—and (2) measurable changes in student and faculty perceptions of writing and learning. To these ends, we gathered two different sets of data to investigate the effects of a WAC/WID program at an open enrollment institution.

Institutional data on student performance: The first set of data comes from the college's own institutional research. We were able to retrieve student data for five variables: whether the student was first generation in college, the ethnicity of the student, the sex of the student, and the student's grade. Additionally, using the grade variable, we generated a measure of student success. Student success, an important measure at community colleges, is a dummy variable that assess whether or not a student passes with a C or better.

These variables were taken from two populations. For each faculty member who participated in WAC/WID, we examined two semesters of pre-WAC/WID intervention data for each of the above variables. We also examined three semesters of post-WAC/WID intervention data. For the time period in question, this amounted to 19 faculty members and a total of 51 pre-intervention and 101 post-intervention classes, or 468 pre-intervention and 757 post-intervention students.

The size of this pool of data allowed us to perform basic statistical analyses on the differences in the two populations. Specifically, the 2-proportion test and the two-tailed t-test were used to compare differences in pre- and post-WAC/WID intervention averages. Only statistically significant results are reported (p =< .01). These tests allowed us to measure the actual impact the program had on student performance. Further, because the experimental design allowed us to hold the instructor constant, we can say that differences between the groups are due to our independent variable: WAC/WID redesigned courses.

Survey data from faculty and students: The second set of data examines the perceptions of both faculty participants and their students. Faculty members accepted into the WAC/WID program were given a pre-WAC/WID intervention survey that asked them about their perceptions and feelings related to student writing, course content, student success, and communication. After teaching their revised course for one semester, faculty members then took a post-WAC/WID intervention survey asking about the same issues.

Additionally, students who were not in redesigned classes (pre-WAC/WID intervention) took a survey about their perceptions, feelings about writing, perceived content mastery, and clarity of professor communication. Then, after the faculty member redesigned the course (post-WAC/WID intervention), his or her new students took the same survey. We could then compare student attitudes *about the same faculty member* before and after the intervention.

Due to survey sample size, statistical tests were not applicable to faculty or student survey results; all potentially indicative results are shared to offer hypotheses upon which future researchers could build.

Results: Grades and Success

As Table 1 indicates, we found a statistically significant improvement in the class grade average of students in post-WAC/WID intervention classes (T-Value = 6.55, P = 0.000). Specifically, students in post-WAC/WID intervention classes had a half letter grade improvement (+.56).

Table 1: Average Student Grade Pre- and Post-WAC/WID Intervention

	Average Grade	Standard Deviation	N
Pre-WAC/WID	2.89 (C+)	1.23	468
Post-WAC/WID	3.33 (B)	1.08	757

As important as the grade change is, we were further interested in how this change might vary across and within underrepresented racial or ethnic minorities. Table 2 shows the average pre- and post-intervention grade averages for students across ethnicity. The data are reported using the college's institutional categories of race and ethnicity. Within-group comparisons and across group comparisons between the pre-WAC/WID intervention students and the post-WAC/WID intervention students support Kuh's (2008) finding that all students benefit from HIPs, as well as the research from Finley and McNair (2013) that illustrates that participation in multiple HIPs benefits all students. However, our data (both within-group and across group) does not support Kuh's claims that underserved students "benefit more" (Kuh, 2008, p.17) from engaging in HIPs than their traditionally advantaged, white peers. Specifically, nearly all students saw similar half-letter grade improvements. While differences in improvements rates exist between demographics, these variations are due, in part, to differences in sample size. For example, though multiethnic students saw the biggest numerical gains to their grades, they also have the smallest sample in the study (17 and 19 students, respectively). As the number of multiethnic students increases in future studies, we suspect that they would level at the same approximate half-letter grade increase.

It is worth noting the numbers behind the half-letter improvement vary slightly within even the larger demographic groups (an improvement of .29 for African American students, .32 for Hispanic students, and .53 for white students). These small variations might indicate that white students benefit slightly more from this kind of HIP intervention. However, given that the numerical differences ultimately equate to the same half-letter improvement, and that the sample is hundreds of students rather than thousands, these numerical differences are useful only if substantiated by future research. It is perhaps more likely such research would reveal this as just a slight variance within overall equalizing effects, per Finley and McNair (2013). What fundamentally matters is that

students across demographic groups within an open-enrollment setting experienced a similar improvement to their GPAs.

Table 2: Average Student Grade Pre- and Post-WAC/WID Intervention by Ethnicity

	Average Grade Pre-WAC/WID	Average Grade Post-WAC/WID	Standard Deviation Pre	Standard Deviation Post	Pre- Group's N	Post-Group's N
African American	2.733 (C+)	3.02 (B)	1.29	1.215	45	120
Hispanic	2.894 (C+)	3.21 (B)	1.327	1.221	33	93
Multiethnic	1.375 (D)	2.84 (C+)	1.109	1.214	4	13
Asian	3.22 (B)	3.75 (B+)	0.984	0.378	11	8
White	2.90 (C+)	3.43 (B)	1.215	0.9964	369	512

First-generation students are another historically underserved and at-risk population in open-enrollment institutions. Table 3 shows that the results were nearly identical for this group: First generation students saw about the same half-letter grade improvement as their general population counterparts (at +.45 for general population students and +.37 for first generation students).

Table 3: Average Student Grade Pre- and Post-WAC/WID Intervention by First-generation

|	General Population Grade	First Generation Grade	N of Students General	N of First Generation
Pre-WAC/WID	2.89 (C+)	2.85 (C+)	411	57
Post-WAC/WID	3.34 (B)	3.22 (B)	665	92

The data therefore indicate that students, regardless of ethnicity or family history, see a true increase in grade performance. That increase is significant both in pure terms (numeric or half letter grade improvement) and statistically.

Another important metric for the program was to determine the effect, if any, WAC/WID had on completion rates. Table 4 and Figure 1 show that, both numerically and as a percentage, the number of students who successfully completed post-WAC/WID intervention courses was higher.[1] In fact, student completion increased by 7.81% and non-completion rates were lowered to the single digits (T-Value = 4.31, P = 0.000).

Table 4: Student Success Rates Pre- and Post-WAC/WID Intervention

	Students Earning a C or Better	Students Earning a D or worse
Pre-WAC/WID	84.3% (395)	15.6% (73)
Post-WAC/WID	92.21% (698)	7.79% (59)

Figure 1. Number of Students Earning a C or Better Pre- and Post-WAC/WID
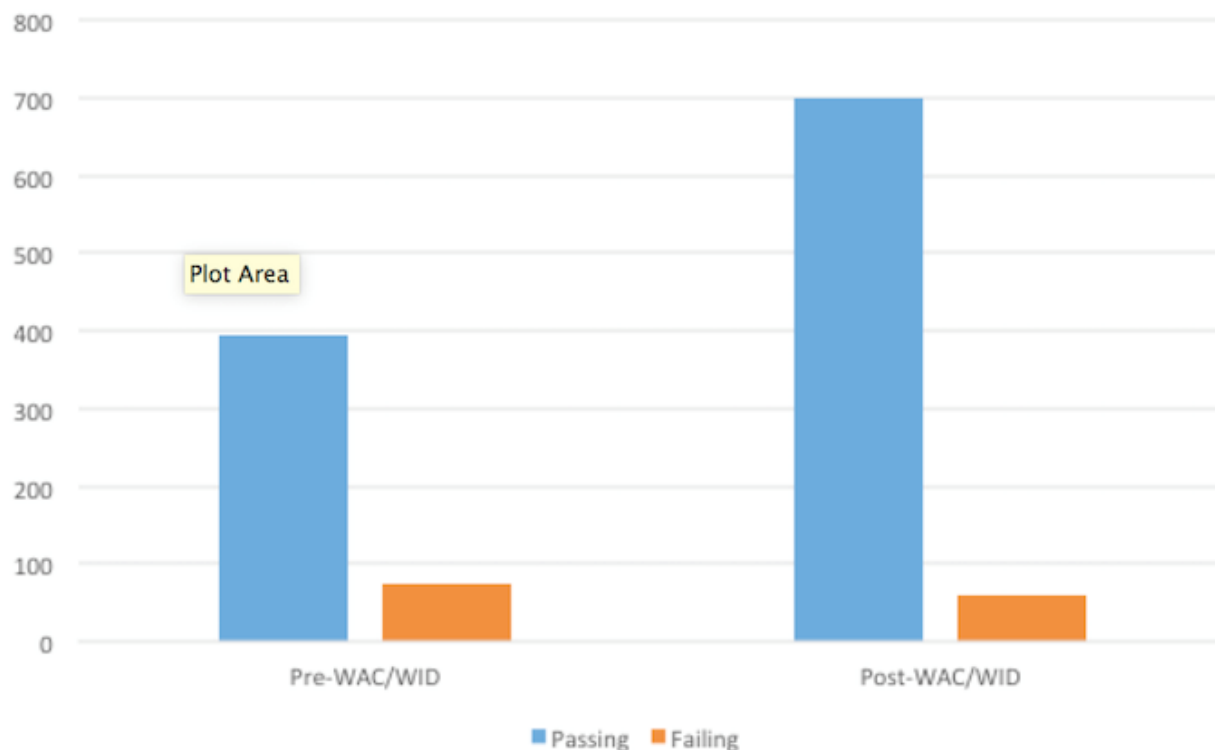
Results: Student and Faculty Perception

In addition to the measurable changes occurring in grades and success, we were interested in how faculty and student perceptions of learning and confidence changed. Faculty were obviously aware that they were working on a redesign; however, student participants did not know if they were in post-WAC/WID intervention classes or not. In fact, it is unlikely that students would even know what that nomenclature means. Questions and their detailed responses follow.

Student Responses: While the total population of students surveyed might be large enough for significance testing—approximately 200 students—when we divide this population into subgroups (ex. those who responded "positive," "neutral," or "negative"), we are working with smaller sample sizes. As a result, the divided groups cannot be compared for significance. In future work, as the sample increases, we will report significance using the matched pair T-test. Currently, we report the numbers for future hypothesis testing—as they do give us, and future researchers, a baseline.

As seen in Figure 2, of the students in the post-WAC/WID intervention courses, 14.6% felt they were becoming a better writer as a result of their course work. Complementing this, Figure 3 reveals that students also felt they were digging deeper into content as a result of writing, a finding that faculty at our institution have been particularly excited to see. Positive student response to this question increased 11.2% while negative feelings decreased by 2.4%.

Figure 2. Pre- and Post-WAC/WID Intervention Student Responses to the Question: "As a result of this course, I am becoming a more effective writer."

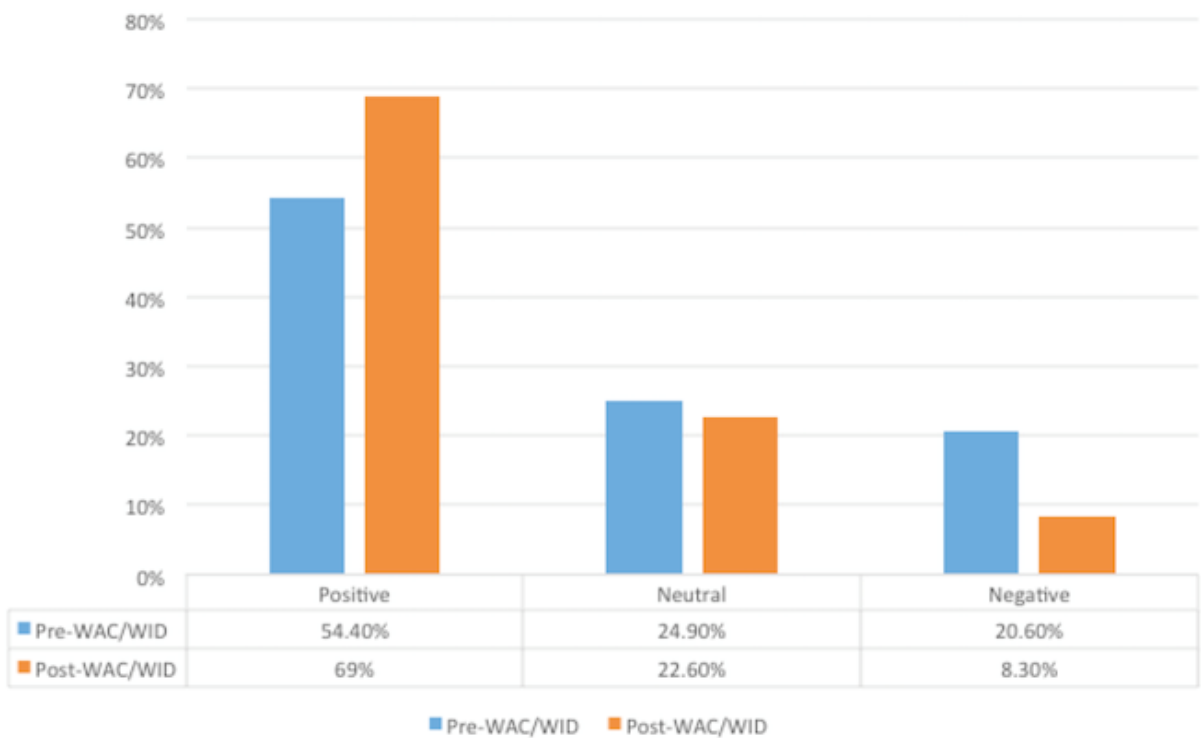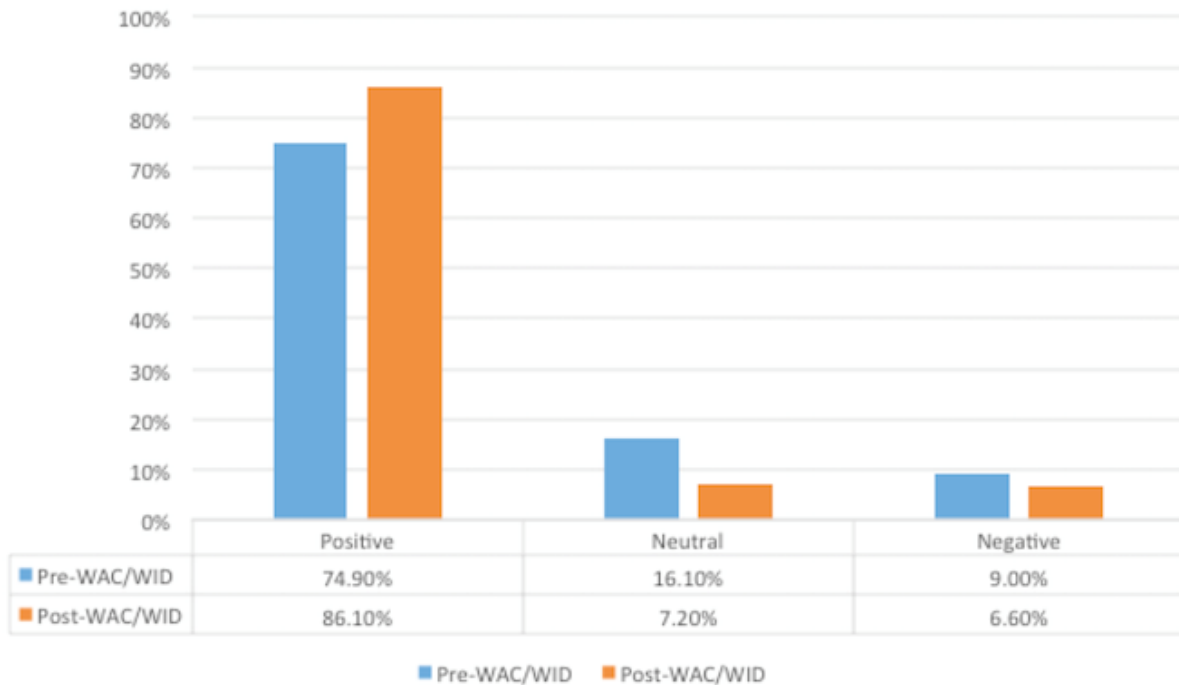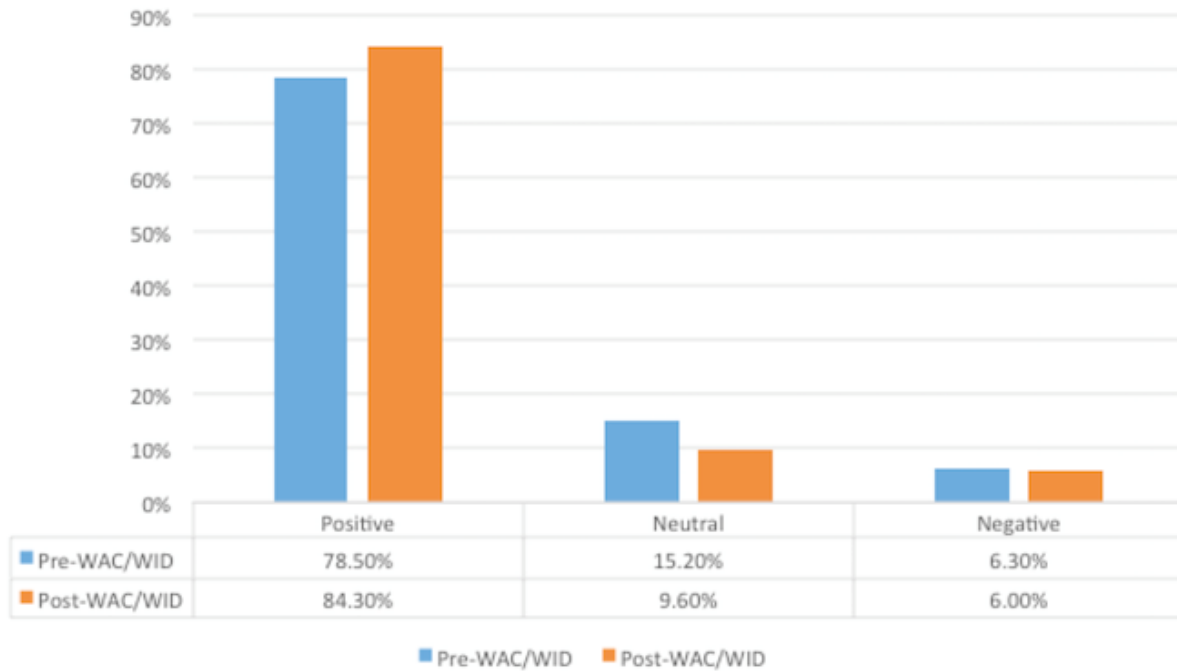|	Positive	Neutral	Negative
Pre-WAC/WID	54.40%	24.90%	20.60%
Post-WAC/WID	69%	22.60%	8.30%

Figure 3. Pre- and Post-WAC/WID Intervention Student Responses to the Question: "I have developed a better/deeper understanding of course content as a direct result of the writing assignments in this class."

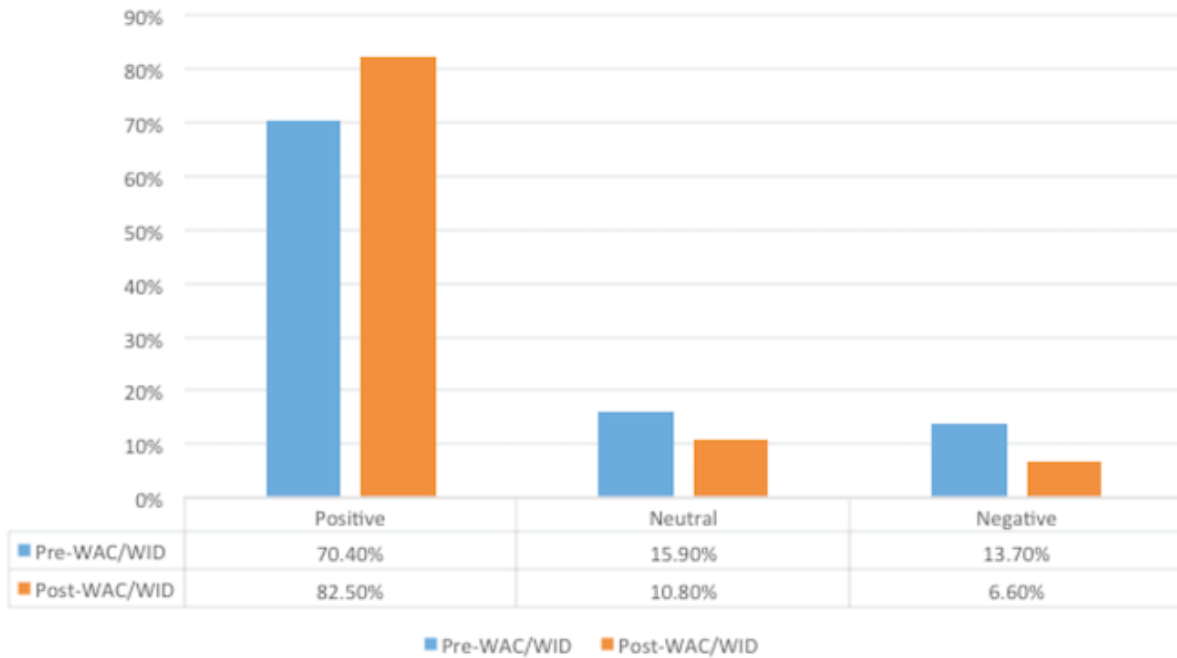|	Positive	Neutral	Negative
Pre-WAC/WID	74.90%	16.10%	9.00%
Post-WAC/WID	86.10%	7.20%	6.60%

Not only did students feel differently about writing and course content, they also reported improving as thinkers. In response to the question, "The writing assignments in this course stimulate my thinking," Figure 4 shows that, while generally (78.5%) students felt this way about their course writing even before a WAC/WID intervention—further confirmation of what the field already knows about the effects of writing on thinking—even more (84.3%) felt this way in their post-WAC/WID intervention courses.

Figure 4. Pre- and Post-WAC/WID Intervention Student Responses to the Question: "The writing assignments in this course stimulate my thinking."

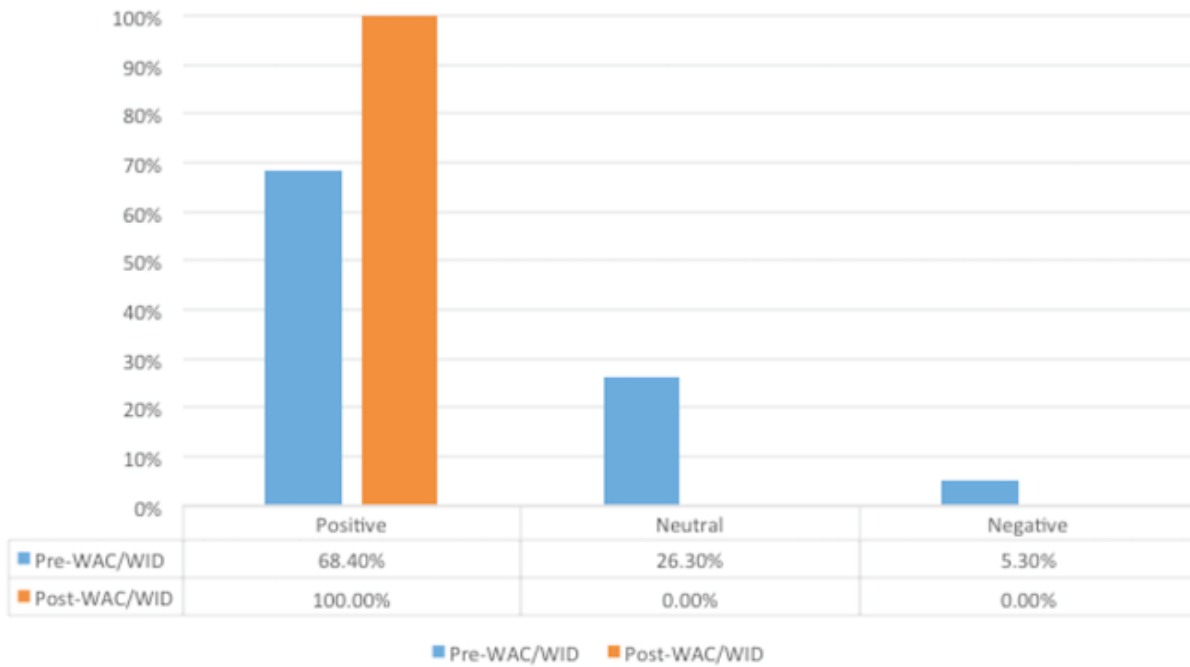|	Positive	Neutral	Negative
Pre-WAC/WID	78.50%	15.20%	6.30%
Post-WAC/WID	84.30%	9.60%	6.00%

Pre-WAC/WID   Post-WAC/WID

A similar effect was observed with students' confidence that the course's writing would better prepare them for future courses, as shown in Figure 5. While 70.4% of students felt this was the case in the pre-WAC/WID intervention courses, 82.5% felt this way in post-WAC/WID intervention courses, and negative responses dropped by 7.1%.

Figure 5. Pre- and Post-WAC/WID intervention student responses to the question: "I believe the writing I'm doing in this course will prepare me for courses I will take in the future."
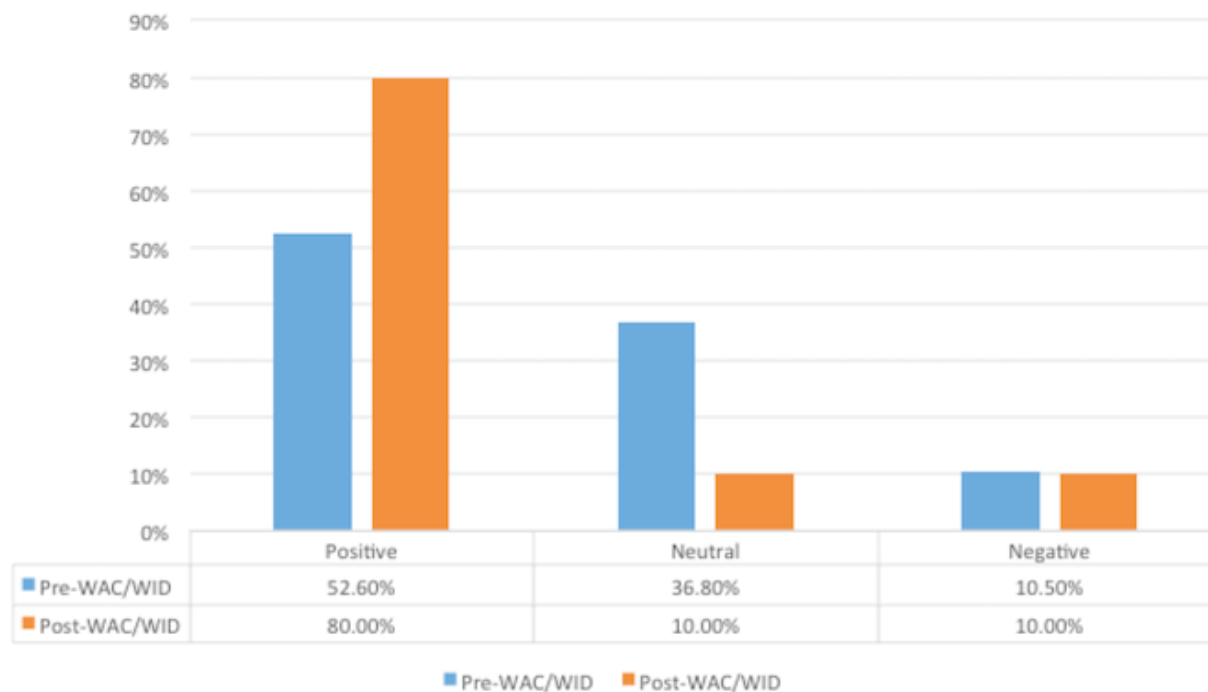

	Positive	Neutral	Negative
■ Pre-WAC/WID	70.40%	15.90%	13.70%
■ Post-WAC/WID	82.50%	10.80%	6.60%

■ Pre-WAC/WID   ■ Post-WAC/WID

Faculty Responses: Finally, we were interested in how faculty members perceived their classes post-WAC/WID intervention. Like the student sample, our faculty sample is small (nineteen faculty members), and, therefore, no significance testing is reported. Results were anonymous. We expected that faculty would have a range of emotions; however, our survey results indicate that faculty felt much more confident in giving feedback after WAC/WID. Figure 6 shows faculty responses to the question were universally positive.

Figure 6. Pre- and Post-WAC/WID Intervention Faculty Responses to the Question: "I feel confident when I give my student feedback on writing assignments."

	Positive	Neutral	Negative
■ Pre-WAC/WID	68.40%	26.30%	5.30%
■ Post-WAC/WID	100.00%	0.00%	0.00%

■ Pre-WAC/WID   ■ Post-WAC/WID

Similarly, faculty felt that students better understood the "planning, designing, and assessing of writing assignments" in their classes. Figure 7 reveals that only half of the faculty reported feeling positive about their ability to plan, design, and assess writing assignments before WAC/WID, while 80% reported feeling positive after the WAC/WID intervention.

Figure 7. Pre- and Post-WAC/WID Faculty Responses to the Question: "During the semester, my students have understood my planning, designing, and assessing of writing assignments"

	Positive	Neutral	Negative
■ Pre-WAC/WID	52.60%	36.80%	10.50%
■ Post-WAC/WID	80.00%	10.00%	10.00%

■ Pre-WAC/WID   ■ Post-WAC/WID

Discussion

From its inception, WAC/WID at Daytona State College prepared to use data to substantiate its—and the field's—claims about WAC/WID's ability to promote active learning, stimulate critical thinking, and deepen students' experience with course content. We set out to measure both student performance changes and changes to the faculty and students' perceptions of learning and confidence as a result of WAC/WID. The results are encouraging. Students who are involved in post-WAC/WID intervention classes, regardless of race or first generation status, see a significant improvement in grades and success.

Considering that recent research indicates that "many effects of college are conditional in that some students appear to benefit more than others from the same educational programs and practices" (as cited in Kuh, 2008, p. 13), our program data demonstrate the wide reach of WAC/WID and its ability to create changes and support practices that "are positive for all types of students" (p.17), including those students who are often characterized as "historically underserved."

Contextualizing the data locally—as Finely and McNair (2013) recommend—lends even more support to our findings that WAC/WID is beneficial to all students. Unlike the national data sets (NSSE) that Kuh and others use for their research, our data come exclusively from a student body that might easily be characterized as almost entirely "at risk" and/or "historically underserved," despite the race and ethnic distributions that might paint a different picture (i.e., the majority of our sample identified as "white"). For example, 88.62% of the Daytona State College student body resides in Volusia or Flagler County, where the median household income and the percentage of persons living below the poverty line are lower and higher, respectively, than state averages according to the U.S. Census Bureau (2009-2013). Socio-economic status is certainly a characteristic that should be

taken into account—along with race and ethnicity—when characterizing populations of students as "historically underserved" or "traditionally advantaged." Similarly, Daytona State College, like many other colleges and universities, only codes students as "first generation" if their parents have no college credits. Despite the fact that only 20.8% and 23.3% of people living in Volusia County and Flagler County, respectively, report having a bachelor's degree or higher, our data reports relatively small numbers of first generation students (57 out of 468 pre- and 92 out of 757 post-). Thus, our institutional definition of "first generation" is certainly excluding students whose parents took one or more college classes, but never earned a baccalaureate or A.A. degree. Colleges and universities that work with at-risk and/or historically underserved student populations, especially those with open-enrollment practices like ours, can take our findings as a positive indicator that WAC/WID approaches can make a meaningful difference in grades and success—results that may help persuade administrators and stakeholders that well-designed and well-assessed WAC/WID programs can support all students, whether they're enrolled in highly selective universities or open-enrollment community colleges.

Additionally, the faculty and student survey findings help illustrate that the common principles that WAC/WID researchers and practitioners have observed for decades also hold true in an open-enrollment institution: These practices improve not only student writing, but also student confidence and content mastery, as well as faculty confidence and clarity about how to communicate assignments effectively to students. The improvement to perceptions of content mastery is particularly meaningful because one of the concerns we often hear from faculty and administrators unfamiliar with WAC/WID is that increasing, or even incorporating, writing assignments might take the focus away from content. Instead, student responses support one of the longstanding premises of WAC/WID pedagogy: Using these principles does not detract from content mastery, but, rather, deepens it. This is no surprise to advocates of WAC/WID approaches, but we've found that sharing this finding directly with faculty who are hesitant about shifting their instructional methods, or administrators concerned or confused about the changes WAC/WID makes to a classroom environment, goes a long way to turning concern into excitement.

The potential implications of looking at the surveys and student grades in light of each other is even more exciting. One hopes that improvements to student grades indicate improvements to student learning — but grades alone are insufficient to substantiate this claim. However, when combined with the improvements to students' perceptions of their writing, thinking and content mastery, this study shows real promise that WAC/WID approaches have positive impacts on student learning in an open-enrollment setting. This finding is particularly timely given the AAC&U's call for college educators and researchers to go beyond just a focus on retention and success and to engage with the deeper educational benefits students can derive from their college experiences (Kuh, 2008).

There are, of course, limitations to the data. In order to collect information across a large selection of students both pre- and post-WAC/WID intervention, we needed to pull from multiple semesters of post-WAC/WID data. This meant we had to focus our data on only the first cohort of faculty to go through the WAC/WID program--a collection of 19 faculty from multiple areas of the college, including the humanities, sciences, math, and business. Though the large variety of disciplines makes the results fairly promising, it is also worth considering that early adopters of a new initiative may be more enthusiastic in their implementation than others. Further research into subsequent cohorts is needed in order to determine if these trends continue to hold true for later adopters.

Also, our data on the effect of the WAC/WID intervention on retention is only suggestive. The high numbers of students who withdraw or earn a grade of FN (F for non-attendance) is a perpetual problem for most open-enrollment institutions. For example, at Daytona State, we see that 28.8% of A.A. students withdrew or earned a grade of FN in the Spring of 2013. In the fall of 2013, 28.9% of

A.A. students withdrew or earned a grade of FN. This means more than a quarter of the A.A. student population is lost due to attrition. For the 2013 WAC/WID cohort, we found that 13% of students withdrew or earned an FN pre-intervention, but only 9.9% of students withdrew or earned an FN post-intervention (15 Ws and 48 FN's out of 468 pre-intervention students; 21 W's and 54 FN's out of 751 post-intervention students). We expected to see lower withdraw/FN rates in our sample due to self-selection. However, we were pleasantly surprised to see that while the general A.A. population saw similar withdraw/FN rates between spring and fall terms, students in post-intervention (fall) courses withdrew or earned FNs at a lower rate than students in the pre-intervention courses (spring).

Although we would certainly like to attribute the decline in attrition to our WAC/WID intervention, we believe more study is needed. A number of additional variables need to be held constant, variables we were unable to control in this study. In particular, we know that rates of attrition are higher in online classes, yet we do not know if our sample population took classes online in the same ratio as the general A.A. population. Further, we know that some students in our 2013 sample were not A.A. students, but students pursuing a B.A. We hypothesize that retention rates are generally higher for B.A. students at Daytona State than A.A. students. Retention is an important issue for WAC/WID programs to address and one that warrants continued investigation.

Despite the aforementioned limitations, HIP advocates and WAC/WID proponents can draw promising implications from this study, especially given that the site for our research was an open-enrollment institution. First and foremost, we hope the statistically significant effects shown here on student GPA and success rates, and the potential retention improvement, will help provide strong, convincing evidence to administrators or faculty who might otherwise consider WAC/WID programs better suited for universities or more selective colleges. This study indicates that WAC/WID certainly can make a meaningful, measurable difference for the kinds of students enrolled at community and state colleges. WAC/WID can help institutions who seek to reap the benefits of high impact practices, to increase success rates, and, potentially, to garner a bigger piece of performance-based funding.

While the data we gathered have produced encouraging results, the product should not be easily separated from the process, especially since procuring funding, designing program assessments, and reporting results is essential for those who will have to justify the existence or the creation of WAC/WID programs at their own institutions (Condon & Rutz, 2012). As McMullen-Light (2010) advocates, finding allies is essential. Specifically because our program exists in an open-enrollment state college without huge reserves of funding for professional development initiatives, it was essential for us to find an ally with a funding source. Like many WAC/WID programs, we found our ally in the college's writing center, which received a special allocation of funds as part of becoming a joint-use service for both Daytona State and University of Central Florida students. We understand, though, that for many others, finding a funding source may present what appears to be an insurmountable obstacle. But, as Adam Banks states in his 2015 CCCC Chair's Address, "Funk, Flight, and Freedom," "We act like being broke is new." While he is specifically speaking of the state of writing programs within an institution's budget, this statement and subsequent ones about finding legitimacy within the academy extend to this discussion of bringing HIPs by way of WAC/WID to open-enrollment institutions. The financial struggle is real, but so are the results of finding a path. And while finding allies is, no doubt, important for everyone interested in and excited by the possible impact of WAC/WID, collaboration is essential to success at open-enrollment institutions.

One potentially obvious but absolutely vital partnership is with those responsible for assessment and institutional research. At most institutions, without these partners the goal of speaking to the direct impact of a program on student performance would be impossible. Yet another important support is to make partnerships with other initiatives that are also using HIPs. Specifically, at our institution,

we found an early ally in the Quanta program, a learning community that incorporates multiple HIPs in its curriculum design.[2] Quanta folks quickly got on board in order to bring together learning community theory and pedagogy with WAC/WID theory and pedagogy. Our subsequent mutual advocacy for one another has helped reinforce both programs at the college and also provides some interesting avenues for joint research. In fact, our initial plan for this paper was to discuss the cumulative effect of WAC/WID and learning communities on students, but delays in data availability at the college have necessitated reserving that discussion for the future.

Finally, it was crucial for us to build relationships among the faculty to make use of our range of backgrounds and skill sets. This article's authors, for instance, have diverse backgrounds that include experience with statistical analysis, survey design, and writing studies; the results presented here would not be possible without the partnerships we formed in the development of the program. To us, one of this study's implications is that it is vital for WAC/WID advocates in open-enrollment institutions to find a particularly broad range of allies to help supplement everything from program design and delivery to assessment and revision.

This study also indicates potential avenues for future research, some of which have already been discussed in relation to the limitations of this study. In addition, as program data accumulate, it will be possible to answer more sophisticated questions: How does the impact continue over time? Do faculty members who go through the WAC/WID program see an increasing benefit as they have time to reflect upon their course redesigns? Do faculty apply WAC/WID principles to other courses? It seems likely that time series analysis could yield important findings in this area.

Additionally, despite our large sample size—which made the tests presented in this article possible—future research should look at WAC/WID program effects across open-enrollment colleges. By looking at a sampling of colleges, more detailed analysis would be possible; to our knowledge this article is the only published work that specifically charts the effect of WAC/WID on students in an open-enrollment setting. Of course, for projects like this to happen, it would help for more community and state colleges to have such programs. We hope that the promising results of studies like this one will enable more open-enrollment institutions to create WAC/WID programs, thus enabling larger-scale studies on the impact of these programs on the historically underserved student populations that these colleges typically serve.

Finally, the act of embarking on this research caused us to realize another significant need for future efforts: More information like this needs to be shared in open-access sources. The difficulty we ran into over and over again in trying to connect our study to larger conversations is that, by virtue of being in a college without a research focus, we do not have access to many of the journals that publish relevant work on education and composition. Our library, like almost all libraries at open-enrollment institutions, subscribes to databases suited to the needs of introductory-level undergraduate students, not graduate or faculty-level concerns. We found ourselves repeatedly blocked, unable to get access to journals without depending on colleagues at research institutions. The WAC Clearinghouse and ATD does faculty like us a huge service by virtue of being open-access, and the difficulties we encountered made it clear that this should be a real area of focus for those interested in increasing the research about WAC/WID, HIPs, and/or open-enrollment institutions. In other words, we strongly encourage scholars interested in these topics to make a point of trying to publish their findings in places where open-enrollment faculty will be able to gain access to them, and for journal editors to revisit the possibility of becoming open-access if they wish to help facilitate positive change in open-enrollment institutions and the students they serve.

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Notes

[1] Though we mentioned this already in methods, it bears repeating: Students who formally withdrew or stopped attending class before the withdrawal date (and thus were assigned an F for non-attendance) were excluded from this measurement of success, as well as the previous GPA measurements, because we did not consider them to have experienced the full effects of the WAC/WID redesigned course.

[2] Founded over thirty years ago as a freshman experience program, Quanta is Daytona State's comprehensive learning community. Each semester of the program is organized into clusters of three courses which are organized around a single theme or "big question," to use Kuh's language. For example, the initial semester joins courses in composition, literature and critical thinking and focuses on race and ethnicity in the United States, and a second semester brings together courses in comparative government, world religion and writing with research with a focus on post-colonial thinking. A team of three professors teach each cluster,

using a pedagogy based on the high-impact practices described by Kuh, including the exploration of common intellectual experiences, problematized course content, a focus on diversity, writing-intensive learning and collaborative assignments and projects executed in small-group settings. Of the six faculty members currently teaching in the program, five have participated in Daytona State's WAC/WID professional development program, and that strategy informs all of Quanta's assignment and student assessment practices. The program has recently expanded to include four semesters of general education courses, a service learning component and a capstone course in which students will complete an original research project.

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